# HCD-EH10

# SERVICE MANUAL

**Ver. 1.4 2006.03**

*US Model*
*Canadian Model*
*AEP Model*
*UK Model*
*E Model*
*Australian Model*

- HCD-EH10 is the amplifier, CD player, tape deck and tuner section in CMT-EH10.

| | | |
|---|---|---|
| CD Section | Model Name Using Similar Mechanism | NEW |
| | Base Unit Name | BU-K8BD83S-WOD |
| | Optical Pick-up Name | KSM-213CDP |
| TAPE Section | Model Name Using Similar Mechanism | NEW |
| | Tape Transport Mechanism Type | H-21SB |

## SPECIFICATIONS

**Main unit**
AUDIO POWER SPECIFICATIONS
POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
(The United States model only)

With 4 ohm loads, both channels driven, from 100 – 20,000 Hz; rated 4 watts per channel minimum RMS power, with no more than 10% total harmonic distortion from 250 milliwatts to rated output.

**Amplifier section**
North-American model:
Continuous RMS power output (reference): 5 + 5 W (4 ohms at 1 kHz, 10% THD)
European model:
DIN power output (rated): 4 + 4 W (4 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 5 + 5 W (4 ohms at 1 kHz, 10% THD)
Music power output (reference): 7 + 7 W
The following are measured at AC 240 V, 50/60 Hz (Australian model), AC 220 V, 60 Hz (Korean model), AC 120 V, 50/60 Hz (Taiwanese model), AC 120 or 240 V, 50/60 Hz (other models)
DIN power output (rated): 4 + 4 W (4 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 5 + 5 W (4 ohms at 1 kHz, 10% THD)
Inputs
AUDIO IN (stereo mini jack): Sensitivity 800 mV, impedance 47 kilohms
Outputs
PHONES (stereo mini jack): Accepts headphones with an impedance of 8 ohms or more
SPEAKER: Accepts impedance of 4 ohms

**CD player section**
System: Compact disc and digital audio system
Laser Diode Properties
Emission duration: continuous
Laser Output*: Less than 44.6µ W
* This output is the value measurement at a distance of 200mm from the objective lens surface on the Optical Pick-up Block with 7mm aperture.
Frequency response: 20 Hz – 20 kHz
Signal-to-noise ratio: More than 90 dB
Dynamic range: More than 90 dB

**Tape deck section**
Recording system: 4-track 2-channel, stereo

**Tuner section**
FM stereo, FM/AM superheterodyne tuner
Antenna:
FM lead antenna
AM loop antenna
FM tuner section:
Tuning range
North American model: 87.5 – 108.0 MHz (100 kHz step)
Other models: 87.5 – 108.0 MHz (50 kHz step)
Intermediate frequency: 10.7 MHz
AM tuner section:
Tuning range
North American models: 530 – 1,710 kHz (with 10 kHz tuning interval)
531 – 1,710 kHz (with 9 kHz tuning interval)
European model: 531 – 1,602 kHz (with 9 kHz tuning interval)
Other models: 530 – 1,710 kHz (with 10 kHz tuning interval)
531 – 1,602 kHz (with 9 kHz tuning interval)
Intermediate frequency: 450 kHz

**General**
Power requirements
North American model: AC 120 V, 60 Hz
European model: AC 230 V, 50/60 Hz
Australian model: AC 230 – 240 V, 50/60 Hz
Korean model: AC 220 V, 60 Hz
Taiwanese model: AC 120 V, 50/60 Hz
Other models: AC 110 – 120 or 220 – 240 V, 50/60 Hz
Adjustable with voltage selector
Power consumption:
North American model: 23 W
European model: 22 W
1.0 W (in Power off)
Other models: 22 W
Dimensions (w/h/d) (excl. speakers): Approx. 158 × 241.5 × 233 mm
Mass (excl. speakers):
Approx. 2.1 kg
Supplied accessories: Remote Commander (1)/FM/AM antenna (1)

Design and specifications are subject to change without notice.

## COMPACT DISC DECK RECEIVER

**9-879-855-05**
2006C05-1
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**Sony Corporation**
**Personal Audio Division**
**Published by Sony Techno Create Corporation**

SONY®

### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

### Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

**CAUTION**
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

The following caution label is located inside the unit.

This appliance is classified as a CLASS 1 LASER product.

This label is located on the rear exterior.

### SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage.
Check leakage as described below.

### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes.). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

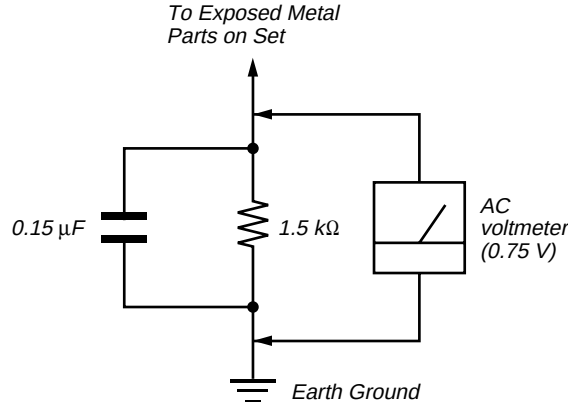


***Fig. A. Using an AC voltmeter to check AC leakage.***

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Refer to SUPPLEMENT-1 for the MAIN section of printed wiring boards and schematic diagrams of US, Canadian, Singapore, Taiwan, Korean and Australian models.
When repairing the set of AEP, UK, East European and Russian, refer to either of original service manual/SUPPLEMENT-1 according to the set.

**SAFETY-RELATED COMPONENT WARNING!!**

**COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

**ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!**

**LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COM- POSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.**

# SECTION 1
# SERVICING NOTES

## UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)

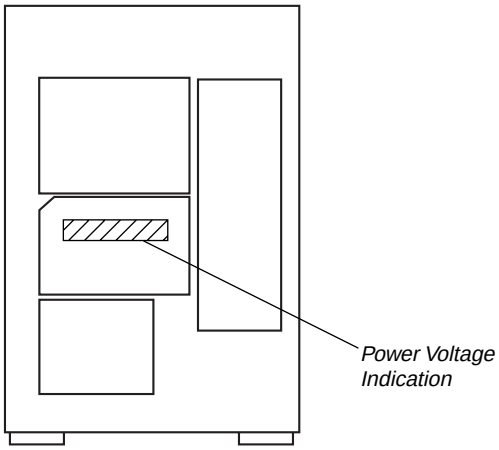
## : LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 ˚C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 ˚C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscou-s (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

## • MODEL IDENTIFICATION

**– Rear Cabinet –**




| MODEL | POWER VOLTAGE INDICATION |
|---|---|
| US, Canadian models | AC 120 V, 60 Hz |
| AEP, UK, East European, Russian models | AC 230 V, 50/60 Hz |
| Singapore model | AC 110 – 120 or 220 – 240 V, 50/60 Hz |
| Australian model | AC 230 – 240 V, 50/60 Hz |
| Korean model | AC 220 V, 60 Hz |
| Taiwan model | AC 120 V, 50/60 Hz |

## NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

## NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

## LASER DIODE AND FOCUS SEARCH OPERATION CHECK

During normal operation of the equipment, emission of the laser diode is prohibited unless the upper lid is closed while turning ON the SW750. (push switch type)
The following checking method for the laser diode is operable.

- **Method**

**Emission of the laser diode is visually checked.**

1. Open the upper lid.
2. Push the SW750 as shown in Fig.1.

**Note:** Do not push the detection lever strongly, or it may be bent or damaged.

3. Press the CD ▶II button.
4. Check the object lens for confirming normal emission of the laser diode. If not emitting, there is a trouble in the automatic power control circuit or the optical pick-up.
   In this operation, the object lens will move up and down 2 times along with inward motion for the focus search.

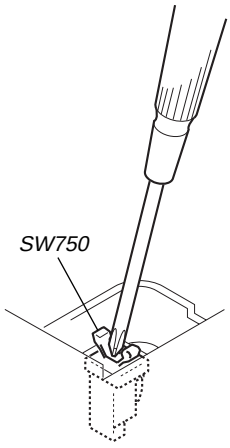
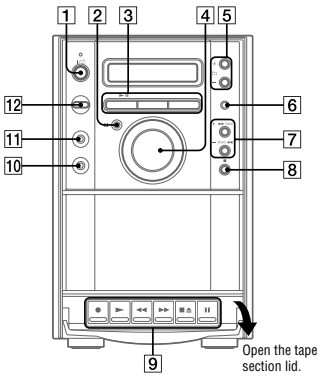


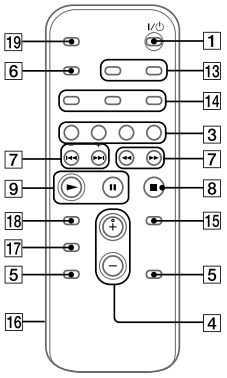

***Fig.1 Method to push the SW750***

# SECTION 2
# GENERAL

This section is extracted from instruction manual.

## Basic Operations

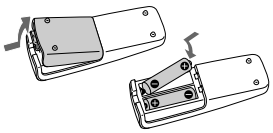



## Before using the system

### To use the remote

Slide and remove the battery compartment lid 16, and insert the two R6 (size AA) batteries (not supplied), ⊖ side first, matching the polarities shown below.



**Notes on using the remote**

- With normal use, the batteries should last for about six months.
- Do not mix an old battery with a new one or mix different types of batteries.
- If you do not use the remote for a long period of time, remove the batteries to avoid damage from battery leakage and corrosion.

### To set the clock

1 Turn on the system.
Press I/⏻ (power) 1.

2 Select the clock set mode.
Press CLOCK/TIMER SET 13 on the remote. If the current mode appears on the display, press ⏮/⏭ 7 on the remote repeatedly to select "CLOCK," and then press ENTER 15 on the remote.

3 Set the time.
Press ⏮/⏭ 7 on the remote repeatedly to set the hour, and then press ENTER 15 on the remote. Use the same procedure to set the minutes.
The clock settings are lost when you disconnect the power cord or if a power failure occurs.

## Selecting a music source

Press the following buttons (or press FUNCTION 3 repeatedly).

| To select | Press |
|---|---|
| CD | CD 3 on the remote. |
| Tuner | TUNER/BAND 3. |
| Tape | TAPE 3 on the remote. |
| Component* (connected using an audio cord) | FUNCTION 3 repeatedly until "AUDIO IN" appears. |

* If the component has the AVLS (Automatic Volume Limiter System) or BASS BOOST function, turn off the function to avoid distorted sound from the speakers.

## Adjusting the sound

### To adjust the volume

Press VOLUME +/– on the remote (or turn the VOLUME control on the unit) 4.

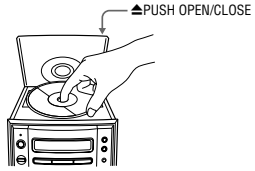
### To add a sound effect

| To | Press |
|---|---|
| Generate a more dynamic sound (Dynamic Sound Generator X-tra) | DSGX 12 on the unit. |
| Set the sound effect | EQ 17 on the remote. |

## Playing a CD/MP3 disc

1 Select the CD function.
Press CD on the remote (or FUNCTION repeatedly) 3.

2 Place a disc.
Press ⏏PUSH OPEN/CLOSE on the unit, and place a disc with the label side up on the CD compartment.
To close the CD compartment, press ⏏PUSH OPEN/CLOSE on the unit.




3 Start playback.
Press ► (play) 9 (or CD/⏯ (play/pause) 3 on the unit).

| To | Press |
|---|---|
| Pause playback | ❚❚ (pause) 9 on the remote (or CD/⏯ 3 on the unit). To resume play, press it again. |
| Stop playback | ■ (stop) 8. |
| Select a folder on an MP3 disc | 🗀 +/– 5. |
| Select a track or file | ⏮/⏭ (go back/go forward) on the remote (⏮◁ ▷⏭ on the unit) 7. |
| Find a point in a track or file | Hold down ◀◀/▶▶ (rewind/fast forward) 7 during playback, and release it at the desired point. |
| Select Repeat Play | REPEAT 14 on the remote repeatedly until "REP" appears. |

### To change the play mode

Press PLAY MODE 14 on the remote repeatedly while the player is stopped. You can select normal play ("🗀" for all MP3 files in the folder on the disc), shuffle play ("SHUF" or "🗀 SHUF*"), or program play ("PGM").

* When playing a CD-DA disc, 🗀 (SHUF) Play performs the same operation as SHUF Play.

**Notes on Repeat Play**

- All tracks or files on a disc are played repeatedly up to five times.
- "REP1" indicates that a single track or file is repeated until you stop it.

**Notes on playing MP3 discs**

- Do not save other types of tracks or files or unnecessary folders on a disc that has MP3 files.
- Folders that have no MP3 files are skipped.
- MP3 files are played back in the order that they are recorded onto the disc.
- The system can only play MP3 files that have a file extension of ".MP3".
- If there are files on the disc that have the ".MP3" file extension, but that are not MP3 files, the unit may produce noise or may malfunction.
- The maximum number of:
  - folders is 150 (including the root folder).
  - MP3 files is 255.
  - MP3 files and folders that can be contained on a single disc is 256.
  - folder levels (the tree structure of files) is eight.
- Compatibility with all MP3 encoding/writing software, recording device, and recording media cannot be guaranteed. Incompatible MP3 discs may produce noise or interrupted audio or may not play at all.

**Notes on playing multisession discs**

- If the disc begins with a CD-DA (or MP3) session, it is recognized as a CD-DA (or MP3) disc, and playback continues until another session is encountered.
- A disc with a mixed CD format is recognized as a CD-DA (audio) disc.

## Listening to the radio

1 Select "FM" or "AM."
Press TUNER/BAND 3 repeatedly.

2 Select the tuning mode.
Press TUNING MODE 14 on the remote repeatedly until "AUTO" appears.

3 Tune in the desired station.
Press +/– on the remote (or TUNING + or – on the unit) 7. Scanning stops automatically when a station is tuned in. When you tune in a station that provides RDS services, the station name appears on the display.

**Tip**
To stop automatic scanning, press ■ (stop) 8.

### To tune in a station with a weak signal

Press TUNING MODE 14 on the remote repeatedly until "MANUAL" appears, and then press +/– on the remote repeatedly (or TUNING + or – on the unit) 7 to tune in the desired station.

### To reduce static noise on a weak FM stereo station

Press FM MODE 14 on the remote repeatedly until "MONO" appears to turn off stereo reception.

## Playing a tape

Use buttons on the unit for the operation.

1 Select a tape function.
Press FUNCTION repeatedly (or TAPE on the remote) 3.

2 Insert a tape.
Press ■⏏ (stop/eject) 9 on the unit, and insert the tape into the cassette holder. Make sure there is no slack in the tape to avoid damaging the tape or the tape deck.

3 Start playback.
Press ► (play) 9 on the unit.

| To | Press |
|---|---|
| Pause playback | ❚❚ (pause) 9 on the unit. To resume play, press it again. |
| Stop playback | ■⏏ (stop/eject) 9 on the unit. |
| Rewind or fast forward* | ◀◀/▶▶ 9 on the unit. |

* Be sure to press ■⏏ (stop/eject) 9 on the unit after the tape has been wound or rewound to the end.

**Note**
Do not turn off the system during playback or recording.

## Changing the display

| To change | Press |
|---|---|
| Information on the display[1] | DISPLAY 6 repeatedly when the system is on. |
| Display mode (Clock) | DISPLAY 6 when the system is off[2]. The clock is displayed for eight seconds. |

[1] For example, you can view CD/MP3 disc information, such as the track or file number or folder name during normal play, or the total play time while the player is stopped.
[2] The STANDBY indicator lights up when the system is turned off.

**Notes on the display information**

- The following are not displayed correctly;
  - total playing time for a disc with MP3 files.
  - elapsed playing time and remaining time of an MP3 file encoded using a VBR (variable bit rate) when the file is played or is shifted with fast forward or fast reverse.
  - folder and file names that do not follow either the ISO9660 Level 1 or 2 standard.
- The following are displayed;
  - ID3 tag information for MP3 files when ID3 version 1 and version 2 tags are used.
  - up to 15 characters of ID3 tag information using uppercase letters (A to Z), numbers (0 to 9), and symbols ('< > * + , – / @ [ \ ] _).

## Using optional audio components

### To connect an optional headphones

Connect headphones to the PHONES jack 10 on the unit.

### To connect an optional component

Connect additional audio source components to the AUDIO IN jack 11 on the unit using an audio cord (not supplied). Turn down the volume on the system, and then select the AUDIO IN function.

# Other Operations

## Creating your own CD program (Program Play)

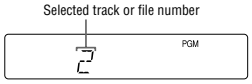
Use buttons on the remote to create your own program.

1 Press CD [3] to select the CD function.

2 Press PLAY MODE [14] repeatedly until "PGM" appears while the player is stopped.

3 Press ⏮/⏭ (or ⏮◁◁ ▷▷⏭ on the unit) [7] repeatedly until the desired track number appears.

When programing MP3 files, press 🗀 +/– [5] repeatedly to select the desired folder, and then select the desired file.




4 Press ENTER [15] to add the track or file to the program.

5 Repeat steps 3 through 4 to program additional tracks or files, up to a total of 15 tracks or files.

6 To play your program of tracks or files, press ► [9] (or CD/⏯ [3] on the unit).

The program remains available until you open the CD compartment. To play it again, select the CD function, and press ► [9] (or CD/⏯ [3] on the unit).

To cancel Program Play, press PLAY MODE [14] repeatedly until "PGM" disappears while the player is stopped.

To delete the last track or file of the program, press CLEAR [18] on the remote while the player is stopped.

To view program information, such as total track number of the program, press DISPLAY [6] repeatedly.

## Presetting radio stations

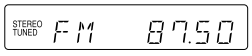
You can preset your favorite radio stations and tune them in instantly by selecting the corresponding preset number.
Use buttons on the remote to preset stations.

1 Press TUNER/BAND [3] repeatedly to select "FM" or "AM."

2 Press TUNING MODE [14] repeatedly until "AUTO" appears (or "MANUAL" appears, for a station with a weak signal).

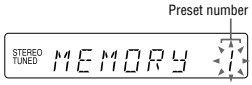
3 Press +/– (or TUNING + or – on the unit) [7] to tune in the desired station.

Scanning stops automatically when a station is tuned in, and then "TUNED" and "STEREO" (for stereo programs) appear.




If "TUNED" does not appear and the scanning does not stop, press TUNING MODE [14] until "MANUAL" appears and press +/– (or TUNING + or – on the unit) [7] repeatedly to tune in the desired station.

4 Press TUNER MEMORY [14] on the remote.




5 Press +/– (or TUNING + or – on the unit) [7] repeatedly to select your desired preset number.

If another station is already assigned to the selected preset number, the station is replaced by the new stations.

6 Press ENTER [15].

7 Repeat steps 1 through 6 to store other stations.

You can preset up to 20 FM and 10 AM stations. The preset stations are retained for about half a day even if you disconnect the power cord or if a power failure occurs.

8 To call up a preset radio station, press TUNING MODE [14] repeatedly until "PRESET" appears, and then press +/– (or TUNING + or – on the unit) repeatedly [7] to select the desired preset number.

To change the AM tuning interval from the factory preset to 9 kHz (or 10 kHz, for some areas; this function is not available on the European model), tune in any AM station, and then turn off the system. Press DISPLAY to display the clock and while hold down TUNING + [7] on the unit, press I/⏻ [1] on the unit. All the AM preset stations are erased. To reset the interval to the factory preset, repeat the procedure.

## Recording onto a tape

Use a TYPE I (normal) tape only.

You can record just the portions you like from a sound source, including connected audio components.

Use buttons on the unit to control tape recording.

1 Insert a recordable tape into the cassette holder with the side you want to record facing forward.

2 Prepare the recording source.

Select the desired source to record.

Place the disc you want to record.

When recording a folder from an MP3 disc, press PLAY MODE [14] on the remote repeatedly to select "🗀," and then press 🗀 +/– [7] repeatedly to select the desired folder.

To record only your favorite CD tracks or MP3 files in your desired order, perform steps 2 to 5 of "Creating your own CD program."

3 Start recording.

Press ● (record) [9], and then start playing the desired recording source.

The CD starts playing automatically.

If there is noise while recording from the tuner, reposition the appropriate antenna to reduce the noise.

While recording, you cannot listen to other sources.

To stop recording, press ■⏏ [9].

**Tip**
We recommend that you press ⏸ [9] first, and then press ■⏏ [9] to avoid noise being recorded when you stop recording.

## Using the Timers

The system offers two timer functions. If you use both timers, the Sleep Timer has priority.

**Sleep Timer:**
You can fall asleep to music. This function works even if the clock is not set.
Press SLEEP [19] on the remote repeatedly. If you select "AUTO," the system automatically turns off after the current disc or tape stops or in 100 minutes.
If the tape deck is still playing or recording at the set time, the system turns off after the tape deck stops.

**Play Timer:**
You can wake up to CD or tuner at a preset time.

Use buttons on the remote to control the Play Timer. Make sure you have set the clock.

1 Prepare the sound source.

Prepare the sound source, and then press VOLUME +/– (or turn the VOLUME control on the unit) [4] to adjust the volume.

To start from a specific CD track or MP3 file, create your own CD program.

2 Press CLOCK/TIMER SET [13].

3 Press ⏮/⏭ [7] repeatedly to select "PLAY," and then press ENTER [15].

"ON TIME" appears, and the hour indication flashes.

4 Set the time to start playing.

Press ⏮/⏭ [7] repeatedly to set the hour, and then press ENTER [15].

The minute indication flashes. Use the procedure above to set the minute.

5 Use the same procedure as in step 4 to set the time to stop playing.

6 Select the sound source.

Press ⏮/⏭ [7] repeatedly until the desired sound source appears, and then press ENTER [15]. The display shows the timer settings.

7 Press I/⏻ [1] to turn off the system.

If the system is on at the preset time, the Play Timer will not play.

To activate or check the timer again, press CLOCK/TIMER SELECT [13], press ⏮/⏭ [7] repeatedly until "PLAY" appears, and then press ENTER [15].

To cancel a timer, repeat the same procedure as above until "OFF" appears, and then press ENTER [15].

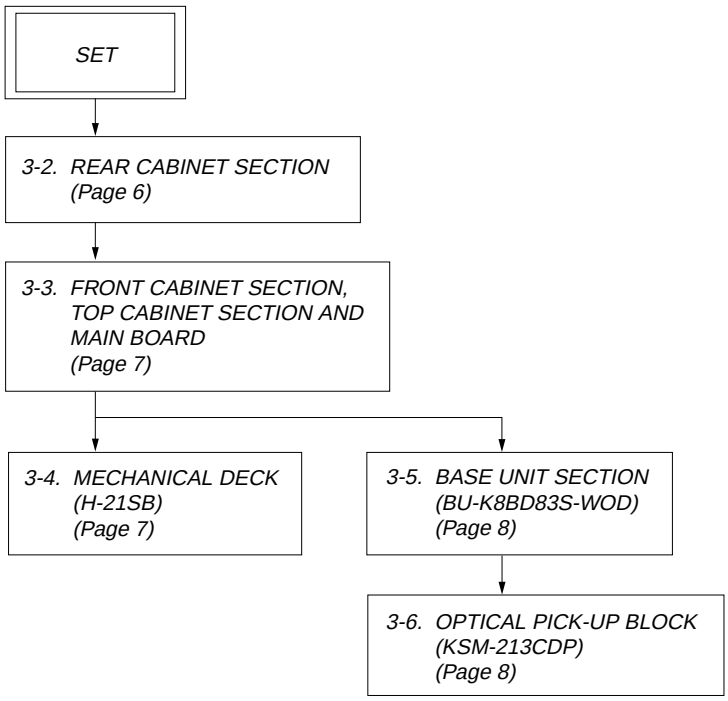
To change the setting, start over from step1.

**Tip**
The Play Timer setting remains as long as the setting is not canceled manually.

# SECTION 3
# DISASSEMBLY

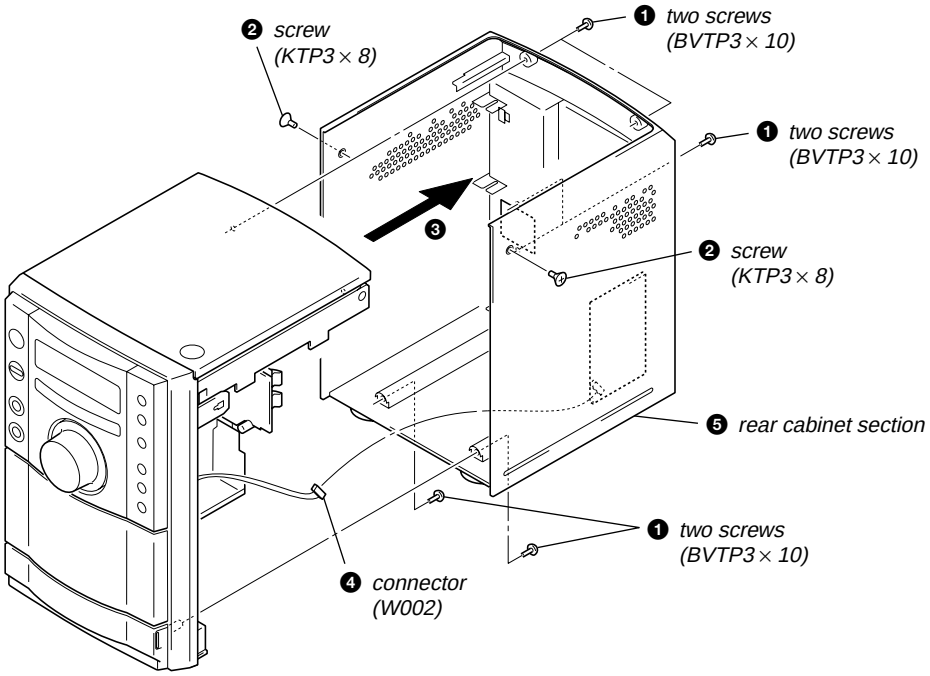
- This set can be disassembled in the order shown below.

## 3-1. DISASSEMBLY FLOW

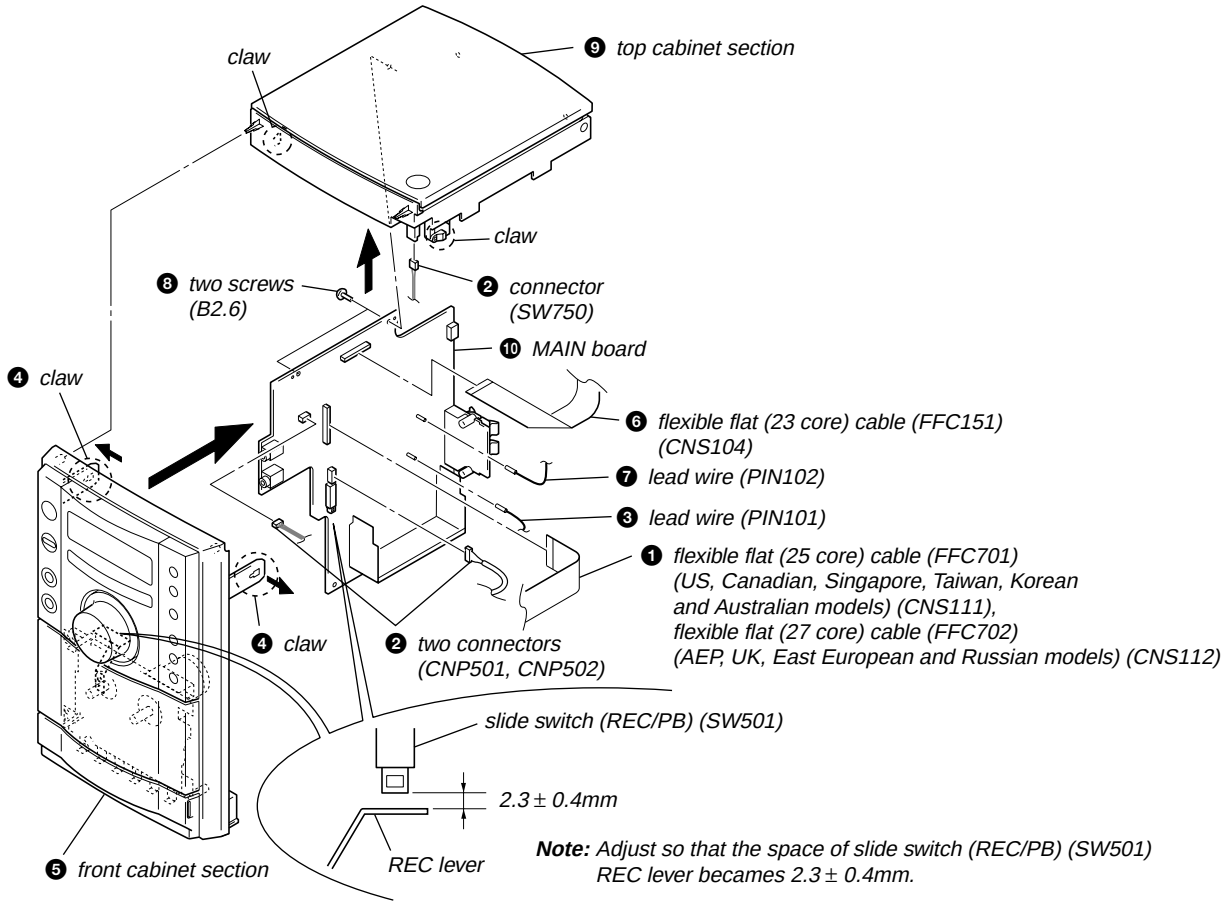



**Note:** Follow the disassembly procedure in the numerical order given.

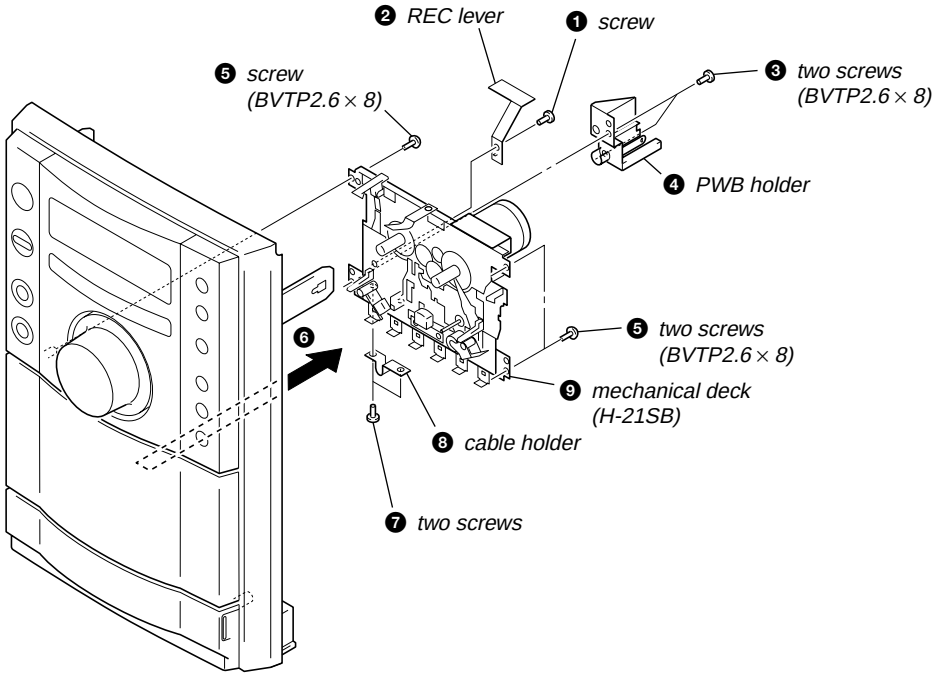
## 3-2. REAR CABINET SECTION



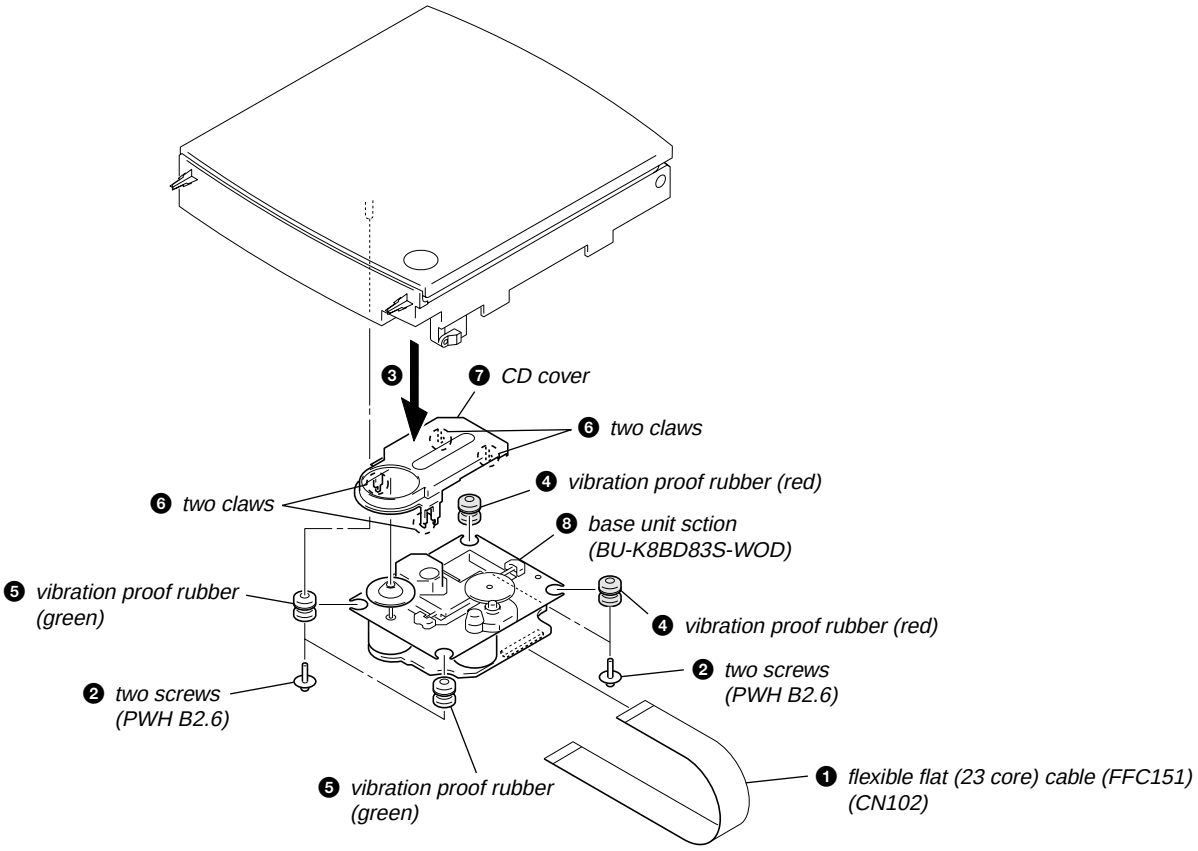
### 3-3. FRONT CABINET SECTION, TOP CABINET SECTION AND MAIN BOARD


claw
9 top cabinet section
claw
8 two screws (B2.6)
2 connector (SW750)
10 MAIN board
4 claw
6 flexible flat (23 core) cable (FFC151) (CNS104)
7 lead wire (PIN102)
3 lead wire (PIN101)
1 flexible flat (25 core) cable (FFC701) (US, Canadian, Singapore, Taiwan, Korean and Australian models) (CNS111), flexible flat (27 core) cable (FFC702) (AEP, UK, East European and Russian models) (CNS112)
4 claw
2 two connectors (CNP501, CNP502)
slide switch (REC/PB) (SW501)
2.3 ± 0.4mm
5 front cabinet section
REC lever
Note: Adjust so that the space of slide switch (REC/PB) (SW501) REC lever becames 2.3 ± 0.4mm.

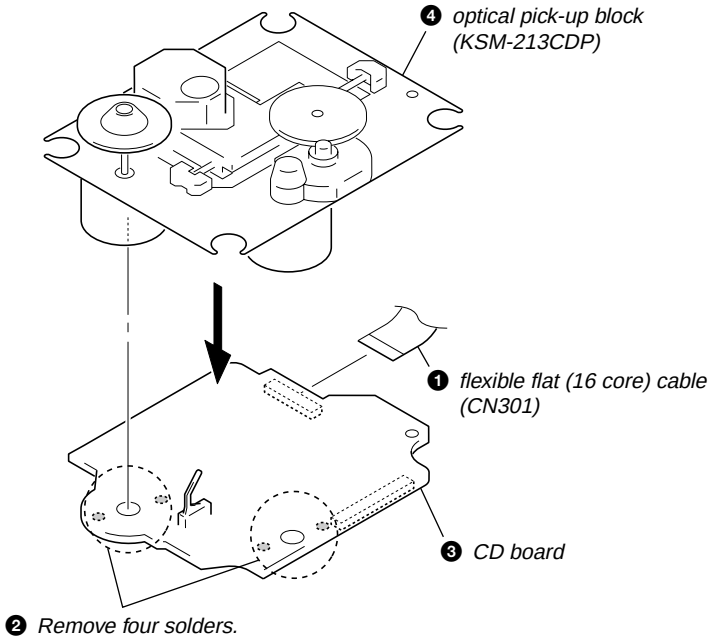
### 3-4. MECHANICAL DECK (H-21SB)



### 3-5. BASE UNIT SECTION (BU-K8BD83S-WOD)




### 3-6. OPTICAL PICK-UP BLOCK (KSM-213CDP)



# SECTION 4
# TEST MODE

### COLD RESET

* The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

**Procedure:**

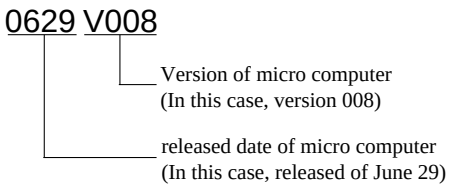
1. Press the I/⏻ button to turn the power on.
2. While pressing the ■ button, press the I/⏻ and DSGX buttons.
3. The message “RESET” is displayed and the set is reset.

### PANEL TEST

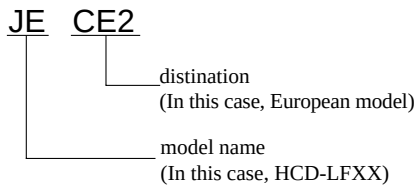
* All segments of liquid crystal display are tested, and the version and released date of the micro computer are displayed.

**Procedure:**

1. Press the I/⏻ button to turn the power on.
2. While pressing the DSGX button, press the DISPLAY and ■ buttons.
   Then all segments of liquid crystal display are turned on.
3. Press the FUNCTION button, the version and released date of the micro computer are displayed.
   **example of display:**


0629 V008
Version of micro computer
(In this case, version 008)
released date of micro computer
(In this case, released of June 29)

4. Press the TUNER/BAND button, the model name and distination are displayed.
   **example of display:**




5. To exit from this mode, perform the step 2.

### TUNER STEP CHANGE-OVER

* Either the 9 kHz step or 10 kHz step can be selected for the AM channel step.

**Procedure:**

1. Set the FUNCTION to AM, and press the I/⏻ button to turn the power off.
2. Press the DISPLAY button.
3. While pressing the TUNING + button, press the I/⏻ button.
4. The message “9K STEP” or “10K STEP” is displayed on the liquid crystal display, and thus the channel step is changed over.

### CD POWER MANEGE

* This mode is for switch the CD power supply on/off. Even if this state pulls out AC plug, it is held.

**Procedure:**

1. Press the I/⏻ button to turn the power on.
2. Set the FUNCTION to CD.
3. Press the I/⏻ button again to turn the power off (standby).
4. Press the DISPLAY button.
5. While pressing the ■ button, press the I/⏻ button.
6. If turns power on and display “CD POWER”, then display “ON” or “OFF”.

### 5 REPEAT OFF MODE

* Number of repeat for CD playback is 5 times when the repeat mode is “REPEAT”. This mode is used to enables CD to repeat playback for limitless times.

**Procedure:**

1. Press the I/⏻ button to turn the power on.
2. Press the FUNCTION button to select “CD”.
3. Press three buttons of DSGX, CD ▶II and DISPLAY simultaneously.
4. When the 5 repeat off mode is activated, “NO LIMIT” is displayed on the liquid crystal display.

# SECTION 5
# MECHANICAL ADJUSTMENTS

- **Precaution**

1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback head　　pinch roller
   erase head　　rubber belts
   capstan　　idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head magnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, appiy suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

- **Torque Measurement**

| Mode | Torque Meter | Meter Reading |
|---|---|---|
| FWD | CQ-102AS | 2.0 – 8.0 mN·m<br>(20 – 80 g·cm)<br>(0.28 – 1.12 oz·inch) |
| FWD<br>Back Tension | CQ-102C | 0.15 – 0.6 mN·m<br>(1.5 – 6.0 g·cm)<br>(0.021 – 0.083 oz·inch) |
| FF | CQ-201AS | 5.0 – 17.7 mN·m<br>(50 – 177 g·cm)<br>(0.7 – 2.48 oz·inch) |
| REW | CQ-201B | 5.0 – 17.7 mN·m<br>(50 – 177 g·cm)<br>(0.7 – 2.48 oz·inch) |

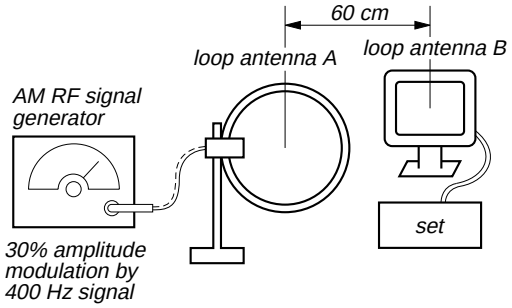
- **Tape Tension Measurement**

| Mode | Tension Meter | Meter Reading |
|---|---|---|
| FWD | CQ-403A | more than 80 g<br>(more than 2.82 oz) |

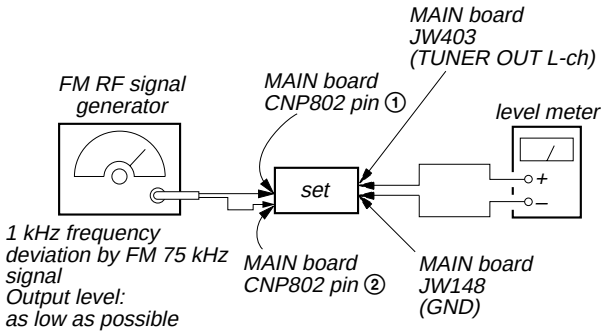
# SECTION 6
# ELECTRICAL ADJUSTMENTS

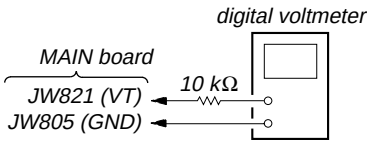
**TUNER SECTION**　0 dB=1 μV

**[AM (MW/LW)]**
**Setting:**
Function : TUNER
BAND button : AM




**[FM]**
**Setting:**
Function : RADIO
RADIO BAND button: FM


MAIN board JW403 (TUNER OUT L-ch)
FM RF signal generator
MAIN board CNP802 pin ①
level meter
set
+
–
1 kHz frequency deviation by FM 75 kHz signal
Output level: as low as possible
MAIN board CNP802 pin ②
MAIN board JW148 (GND)




- Repeat the procedures in each adjustment several times, and the tracking adjustments should be finally done by the trimmer capacitors.
- Remove FM antenna in FM adjustment.

| AM VT VOLTAGE ADJUSTMENT | | |
|---|---|---|
| Adjustment Part | Frequency Display | Reading on Digital Voltmeter |
| L852 | 531 kHz | 1.5 ± 0.1 V |
| Confirmation | 1602 kHz | 7.2 ± 0.5 V |

| AM TRACKING ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on level meter | |
| L851 | 531 kHz |

| FM VT VOLTAGE ADJUSTMENT | | |
|---|---|---|
| Adjustment Part | Frequency Display | Reading on Digital Voltmeter |
| L805 | 87.5 MHz | 1.75 ± 0.1 V |
| Confirmation | 108 MHz | 6.2 ± 0.5 V |

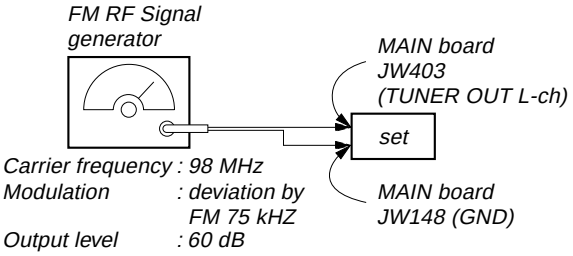
| FM TRACKING ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on level meter | |
| L804 | 98 MHz |

**FM DETECTOR ADJUSTMENT**

**Setting:**

Function: TUNER

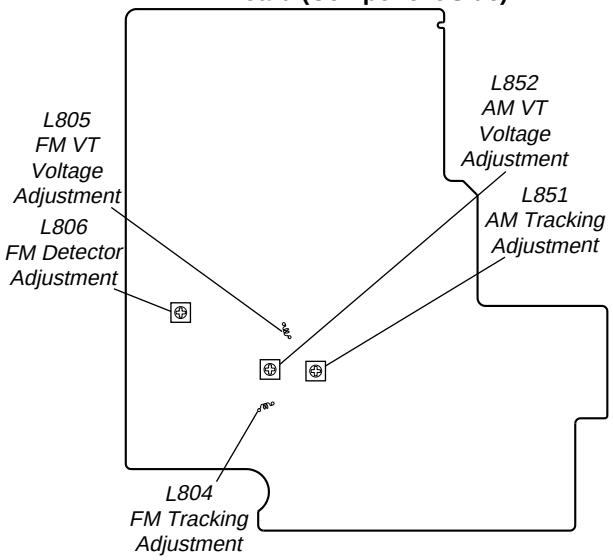
BAND button: FM


FM RF Signal generator
MAIN board JW403 (TUNER OUT L-ch)
set
Carrier frequency : 98 MHz
Modulation : deviation by FM 75 kHZ
Output level : 60 dB
MAIN board JW148 (GND)

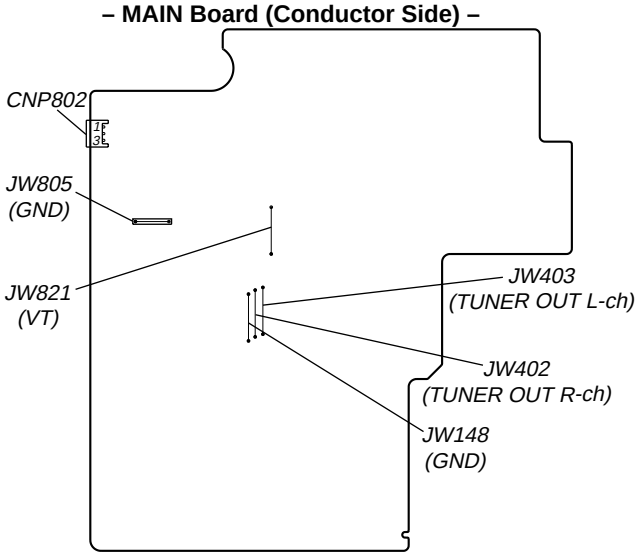
1. Tune the set to 98 MHz.
2. Adjust L806 so that modulation distortion may become the best in the vicinity of the maximum value where the tuner out level becomes -156Bs or more.

**Adjustment Location:**

**– MAIN Board (Component Side) –**


L805 FM VT Voltage Adjustment
L806 FM Detector Adjustment
L852 AM VT Voltage Adjustment
L851 AM Tracking Adjustment
L804 FM Tracking Adjustment

**– MAIN Board (Conductor Side) –**



**DECK SECTION** | 0 dB=0.775 V

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.

- **Test Tape**

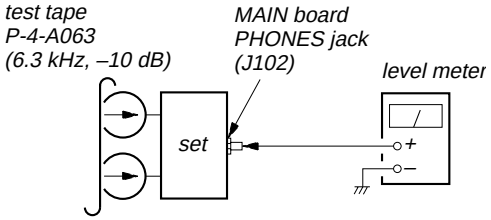
| Tape | Signal | Used for |
|---|---|---|
| P-4-A063 | 6.3 kHz, -10 dB | Azimuth Adjustment |

## RECORD/PLAYBACK HEAD AZIMUTH ADJUSTMENT

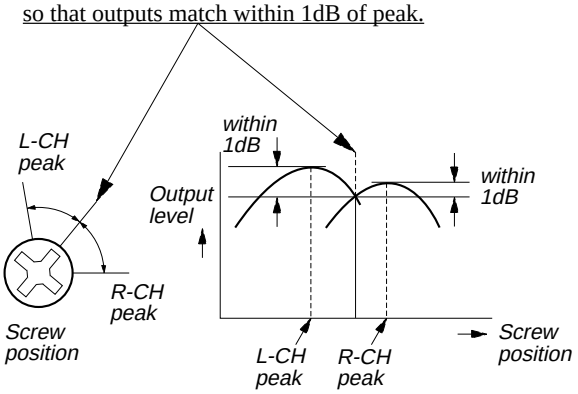
**Note:** Remove the sheet (azimuth) before this adjustment.
After the end of adjustment, try to paste sheet (azimuth) peeled off to be the same position.
Adjust the tape mechanism deck detaching it from the set when there is no hole for the azimuth adjustment in the set.

**Procedure:**

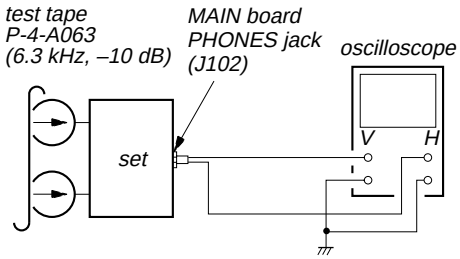
1. Mode: Playback

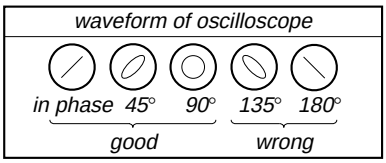



2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.



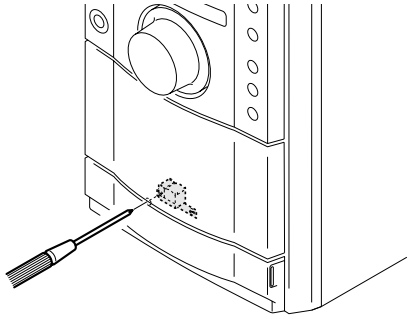

3. Mode: Playback



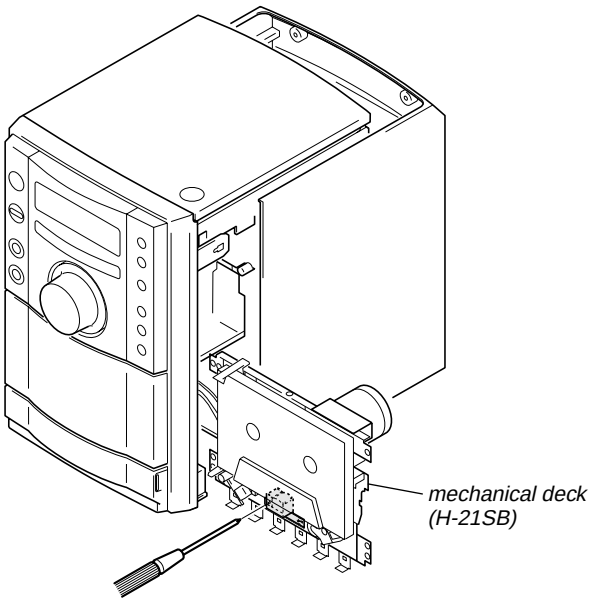




4. After the adjustments, apply suitable locking compound to the pats adjusted.

**Adjustment Location:** Record/Playback/Erase Head
– When there is a hole for the azimuth adjustment –



– When there is no hole for the azimuth adjustment –

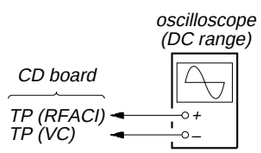


## CD SECTION

**Note:**

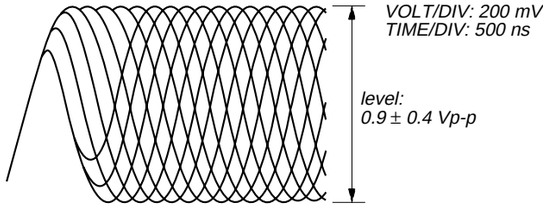
1. CD Block is basically constructed to operate without adjustment.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10 MW impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Check the focus bias check when optical pick-up block is replaced.

## FOCUS BIAS CHECK



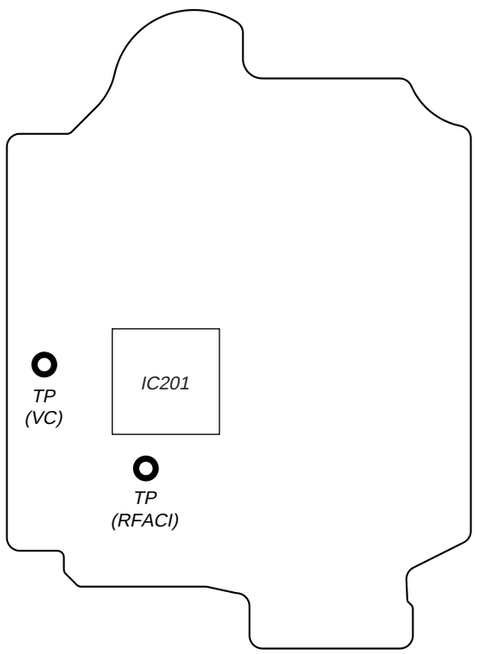

**Procedure :**

1. Connect oscilloscope to TP (RFACI) and TP (VC) on the CD board.
2. Press the I/⏻ button to turn the power ON.
3. Set disc (YEDS-18) on the tray and press the CD ▶II button to playback.
4. Confirm that oscilloscope waveform is as shown in the figure below. (eye pattern)
   A good eye pattern means that the diamond shape (◊) in the center of the waveform can be clearly distinguished.



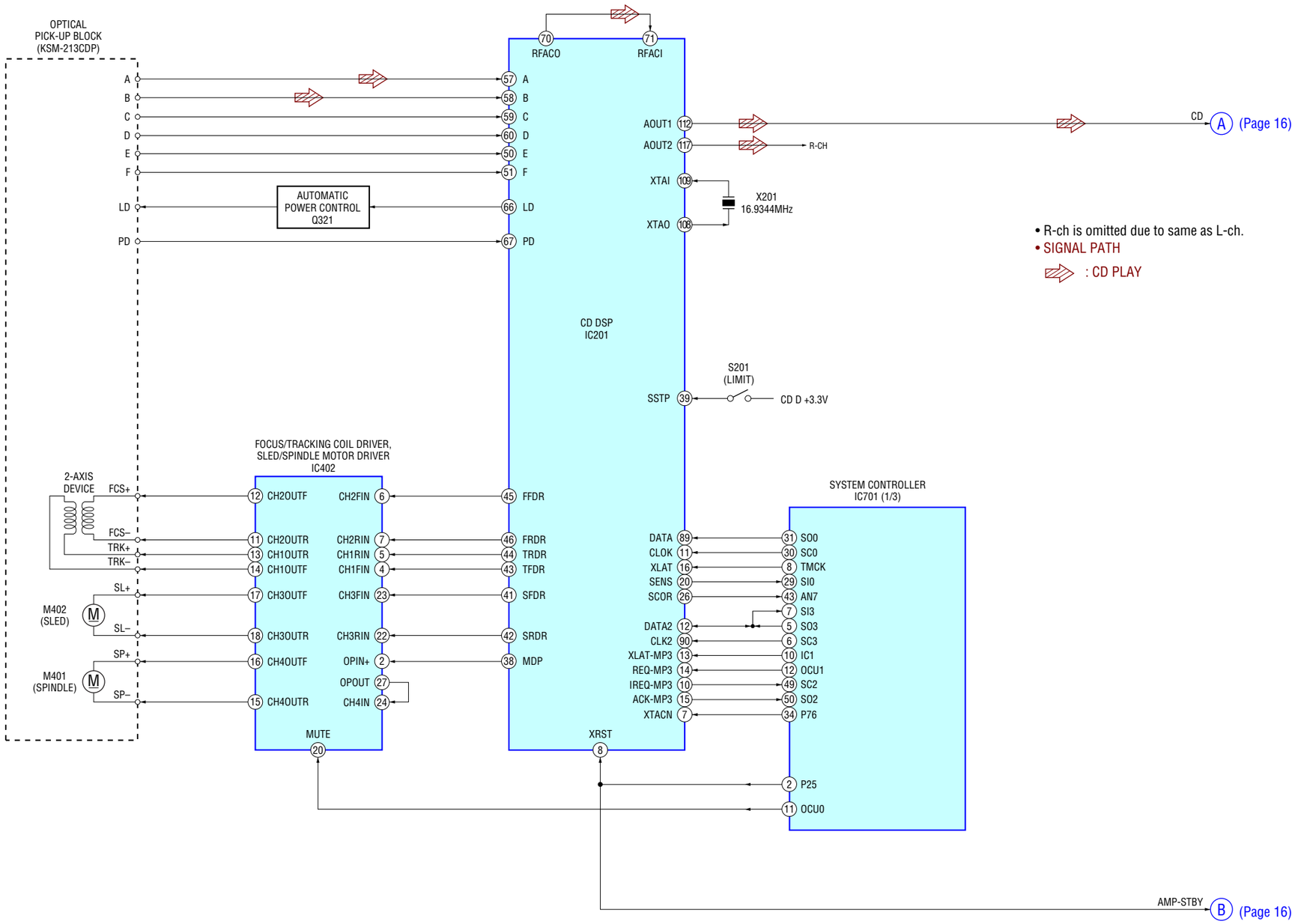

**Checking Location:**

**– CD Board (Conductor Side) –**



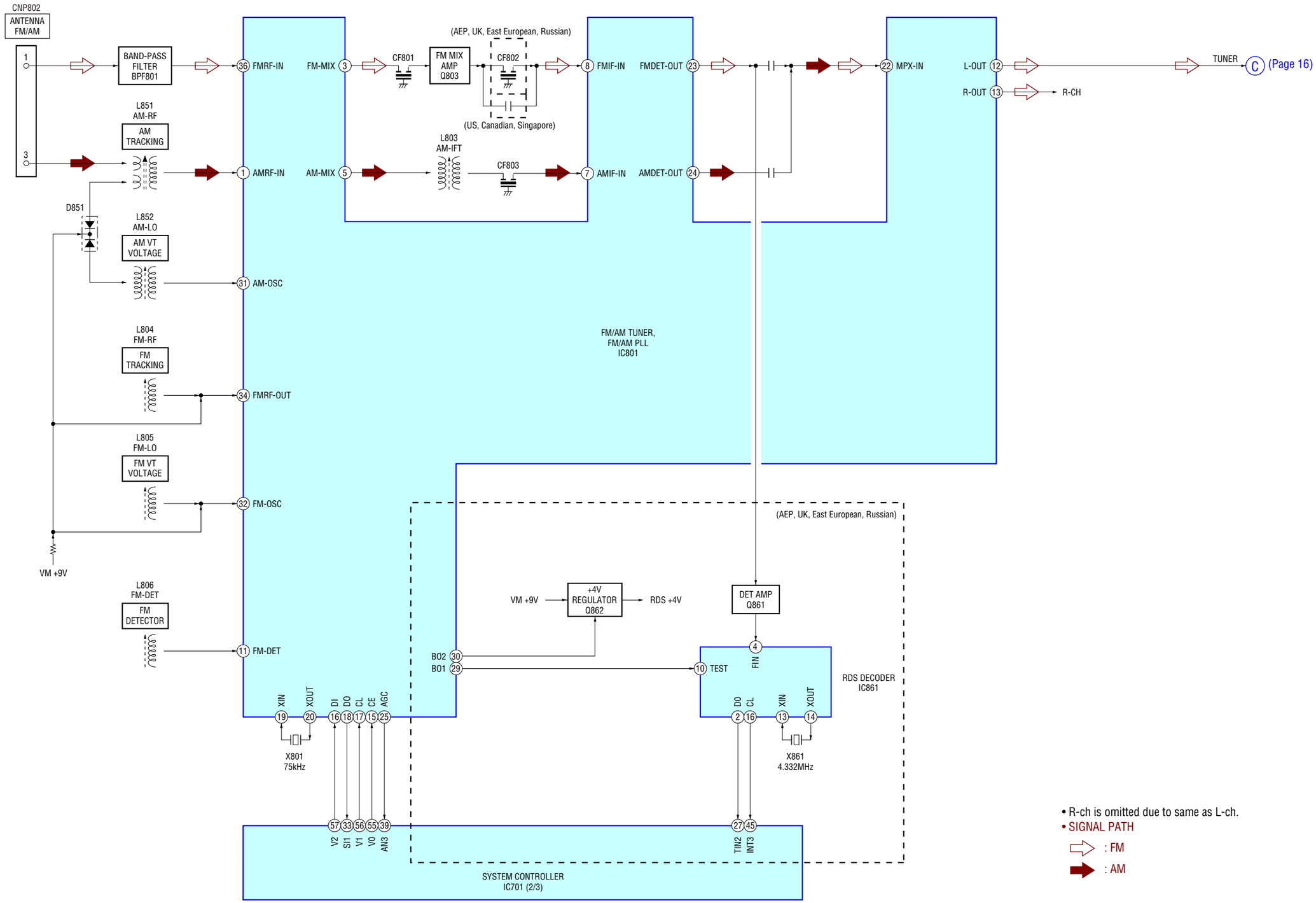
# SECTION 7
# DIAGRAMS

## 7-1. BLOCK DIAGRAM – CD SERVO Section –



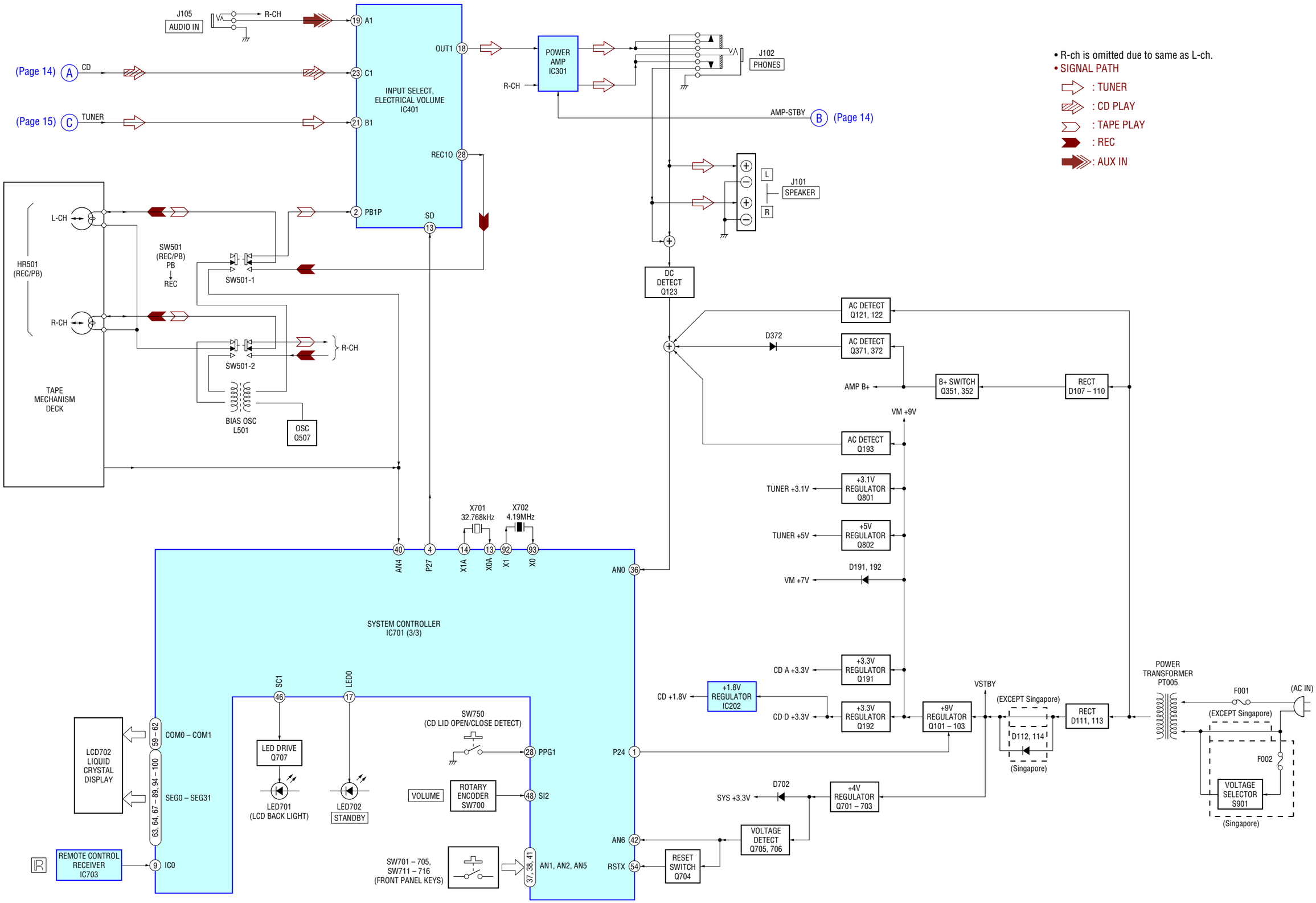

• R-ch is omitted due to same as L-ch.
• SIGNAL PATH
: CD PLAY

## 7-2. BLOCK DIAGRAM – TUNER Section –




• R-ch is omitted due to same as L-ch.
• SIGNAL PATH
: FM
: AM

## 7-3. BLOCK DIAGRAM – MAIN Section –




- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  - : TUNER
  - : CD PLAY
  - : TAPE PLAY
  - : REC
  - : AUX IN

## • Note for Printed Wiring Boards and Schematic Diagrams

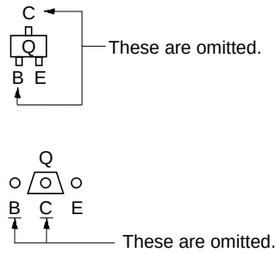
**Note on Printed Wiring Board:**

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.

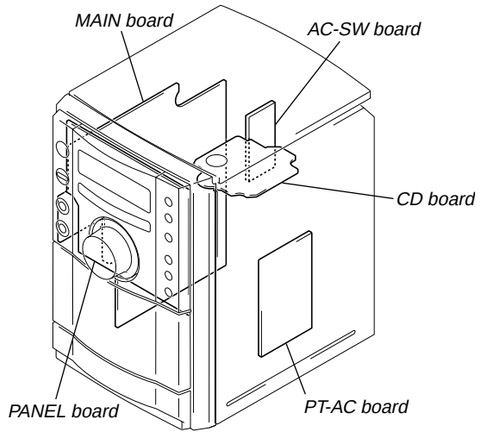
(The other layers' patterns are not indicated.)

| Caution: | |
|---|---|
| Pattern face side: (Conductor Side) | Parts on the pattern face side seen from the pattern face are indicated. |
| Parts face side: (Component Side) | Parts on the parts face side seen from the parts face are indicated. |

- Indication of transistor




- Circuit Boards Location




**Note on Schematic Diagram:**

- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

| **Note:** | **Note:** |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié. |

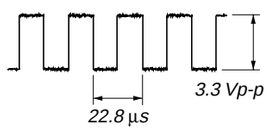
- ▬ : B+ Line.
- ▬ ▬ : B– Line.
- ▭ : Adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  – CD Board –
  no mark : CD PLAY
  – Other Section –
  no mark : FM
  [ ] : AM
  ( ) : CD PLAY
  ⟨⟨ ⟩⟩ : TAPE PLAY
  { } : REC
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM
  ⇨ : CD PLAY
  ⇨ : TAPE PLAY
  ➡ : REC
  ➡ : AUX IN

- Abbreviation
  AUS : Australian model
  CND : Canadian model
  EE : East European model
  KR : Korean model
  RU : Russian model
  SP : Singapore model
  TW : Taiwan model

## • Waveforms

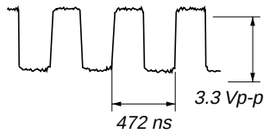
### – CD Board –

**① IC201 ① (LRCK) (CD PLAY mode)**



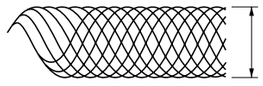

1 V/DIV, 10 µs/DIV

**② IC201 ⑤ (BCK) (CD PLAY mode)**



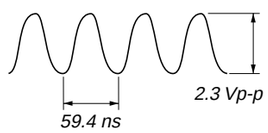

1 V/DIV, 200 ns/DIV

**③ IC201 ⑦⓪ (RFACO) (CD PLAY mode)**




200 mV/DIV, 500 ns/DIV

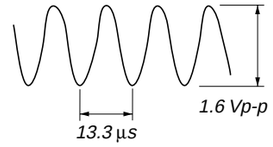
**④ IC201 ⑩⑧ (XTAO) (CD PLAY mode)**




1 V/DIV, 20 ns/DIV

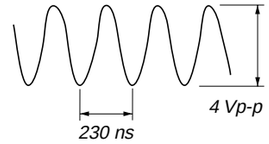
### – MAIN Board –

**⑪ IC801 ⑳ (XOUT) (tuner mode)**




500 mV/DIV, 5 µs/DIV

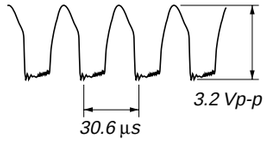
**⑫ IC861 ⑭ (XOUT) (FM mode)**




1 V/DIV, 100 ns/DIV

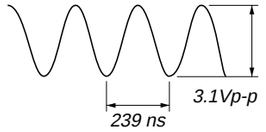
### – PANEL Board –

**㉑ IC701 ⑭ (X1A)**




1 V/DIV, 10 µs/DIV

**㉒ IC701 ⑨② (X1)**



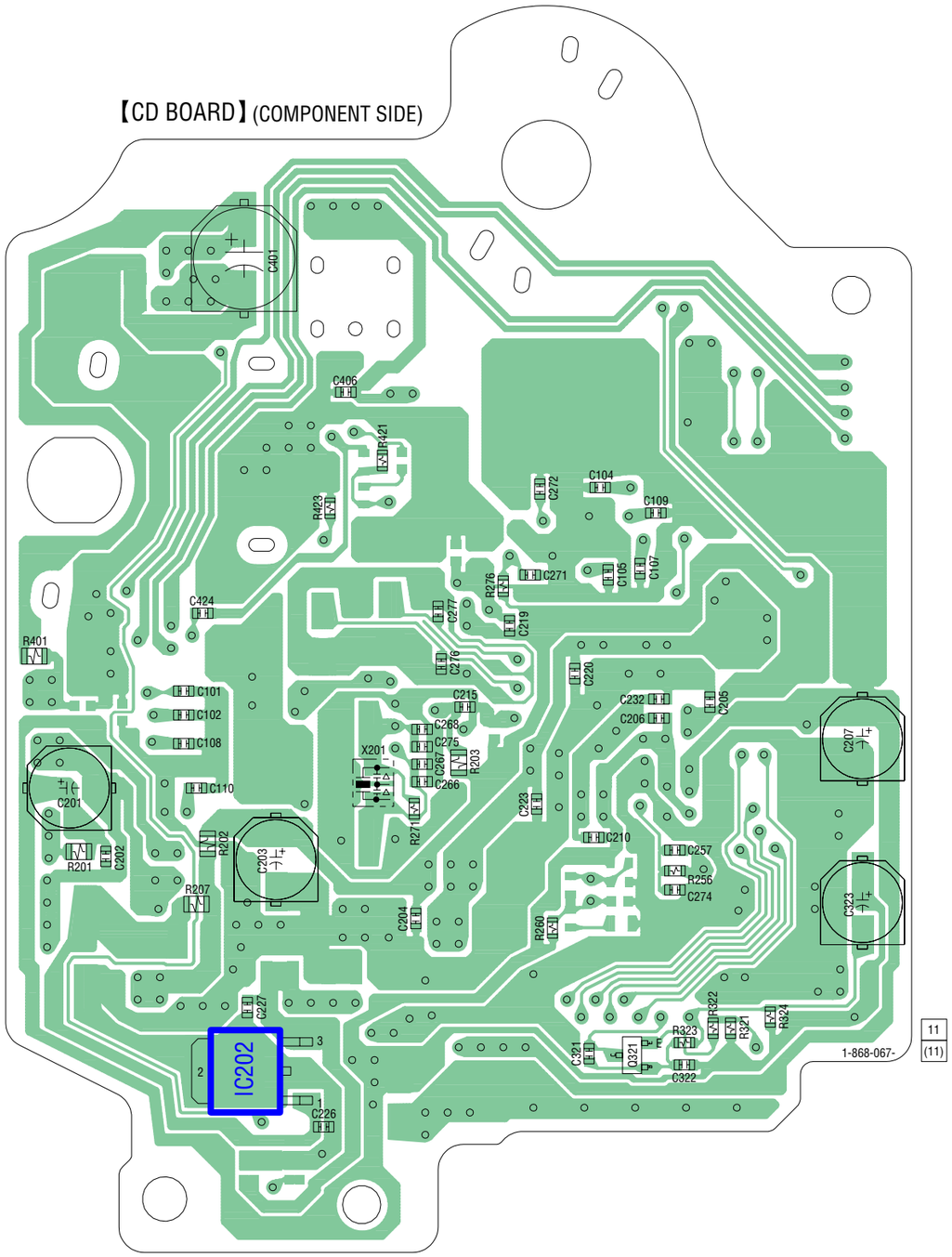

1 V/DIV, 100 ns/DIV

## 7-4. PRINTED WIRING BOARD – CD Board –

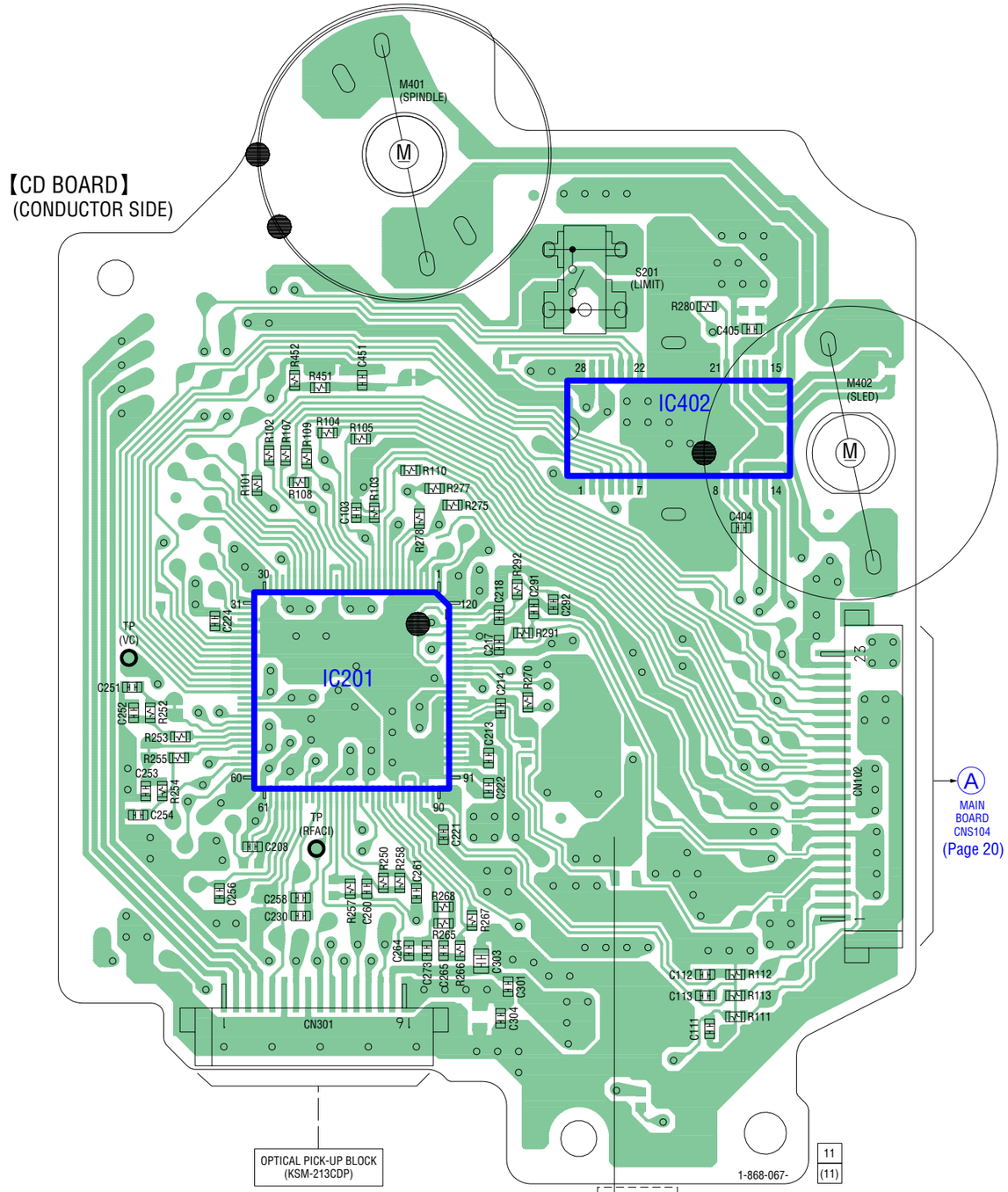
• See page 17 for Circuit Boards Location.

: Uses unleaded solder.

【CD BOARD】(COMPONENT SIDE)

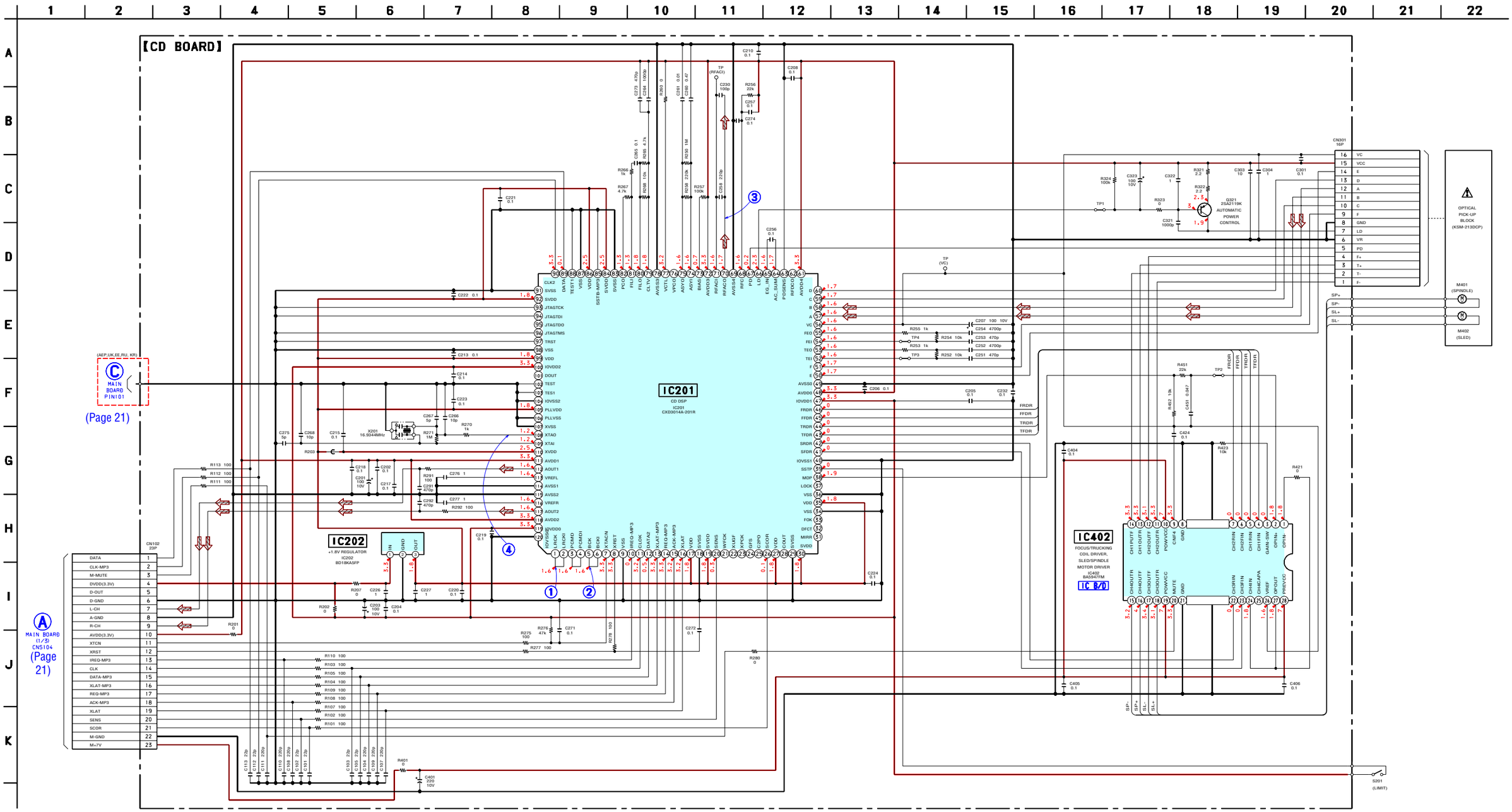



【CD BOARD】
(CONDUCTOR SIDE)



## 7-5. SCHEMATIC DIAGRAM – CD Board –

• See page 17 for Waveforms. • See page 26 for IC Block Diagrams. • See page 31 for IC Pin Function Description.



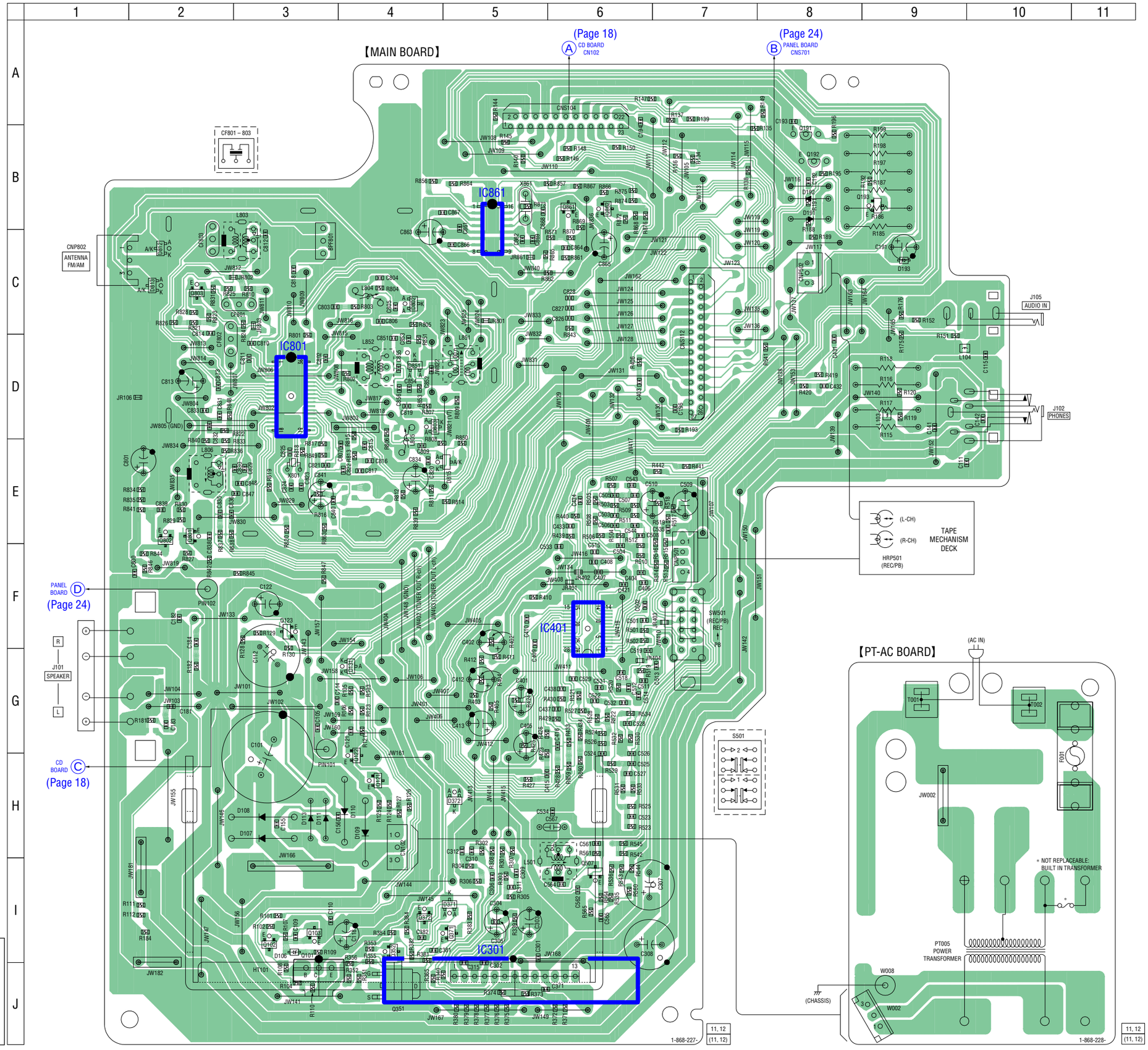
## 7-6. PRINTED WIRING BOARDS – MAIN Section –

• See page 17 for Circuit Boards Location.

: Uses unleaded solder.

• **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D106 | I-3 |
| D107 | H-3 |
| D108 | H-3 |
| D109 | H-4 |
| D110 | H-4 |
| D111 | H-3 |
| D113 | H-3 |
| D131 | G-4 |
| D191 | B-8 |
| D192 | B-8 |
| D193 | C-9 |
| D371 | I-5 |
| D372 | H-5 |
| D802 | C-4 |
| D803 | D-4 |
| D812 | C-2 |
| D813 | C-2 |
| D815 | E-5 |
| D851 | D-4 |
| IC301 | J-5 |
| IC401 | F-6 |
| IC801 | D-3 |
| IC861 | B-5 |
| Q101 | J-3 |
| Q102 | I-3 |
| Q103 | I-3 |
| Q121 | H-4 |
| Q122 | H-4 |
| Q123 | F-3 |
| Q191 | B-8 |
| Q192 | B-8 |
| Q193 | B-9 |
| Q351 | J-4 |
| Q352 | I-4 |
| Q371 | I-5 |
| Q372 | I-4 |
| Q507 | I-6 |
| Q801 | E-2 |
| Q802 | E-2 |
| Q803 | C-2 |
| Q861 | B-6 |
| Q862 | B-6 |




Refer to SUPPLEMENT-1 for the MAIN section of printed wiring boards and schematic diagrams of US, Canadian, Singapore, Taiwan, Korean and Australian models.
When repairing the set of AEP, UK, East European and Russian, refer to either of original service manual/SUPPLEMENT-1 according to the set.

## 7-7. SCHEMATIC DIAGRAM – MAIN Section (1/3) –

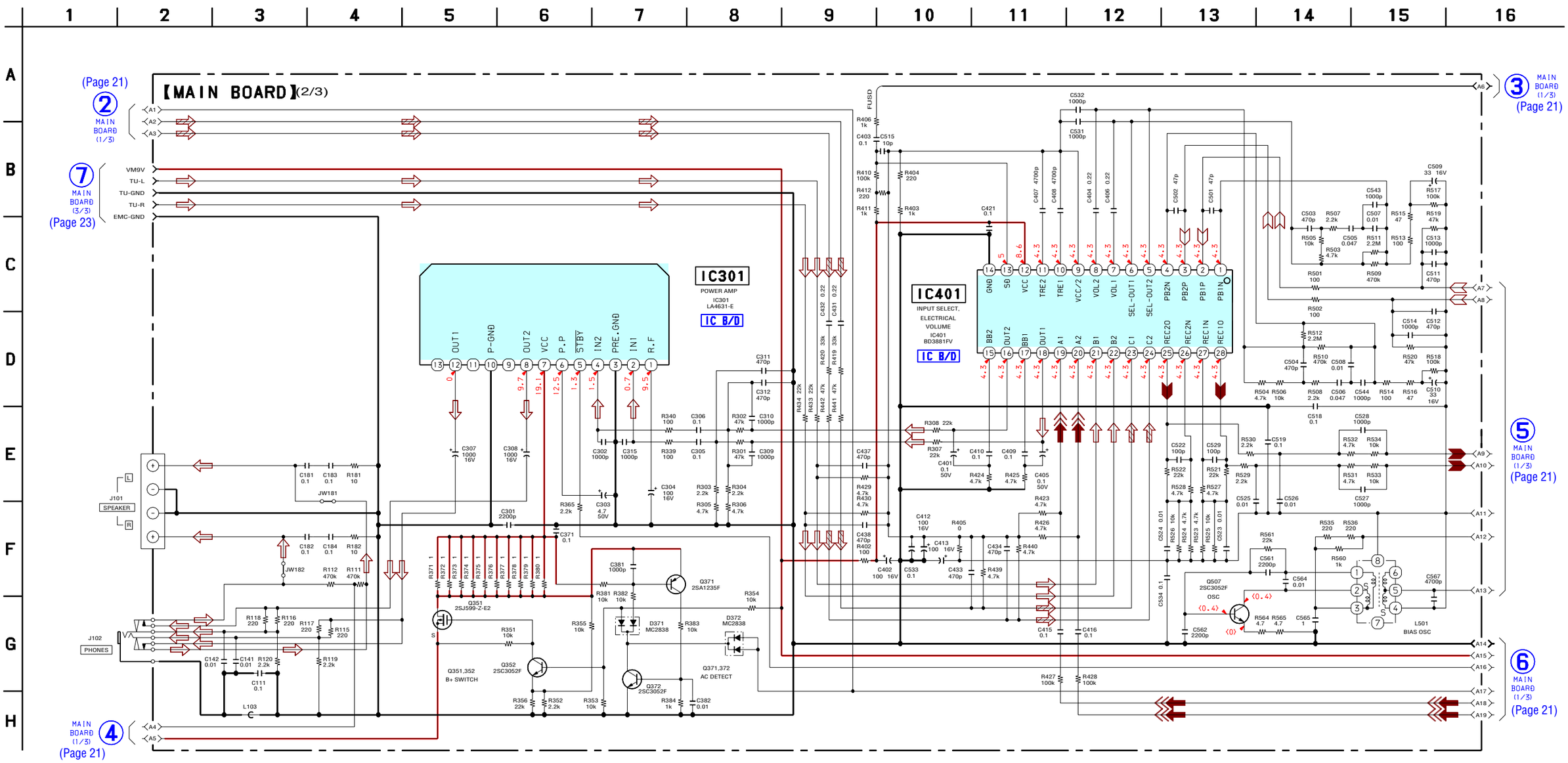
【MAIN BOARD】(1/3)

【PT-AC BOARD】

Refer to SUPPLEMENT-1 for the MAIN section of printed wiring boards and schematic diagrams of US, Canadian, Singapore, Taiwan, Korean and Australian models.
When repairing the set of AEP, UK, East European and Russian, refer to either of original service manual/SUPPLEMENT-1 according to the set.

## 7-8. SCHEMATIC DIAGRAM – MAIN Section (2/3) –

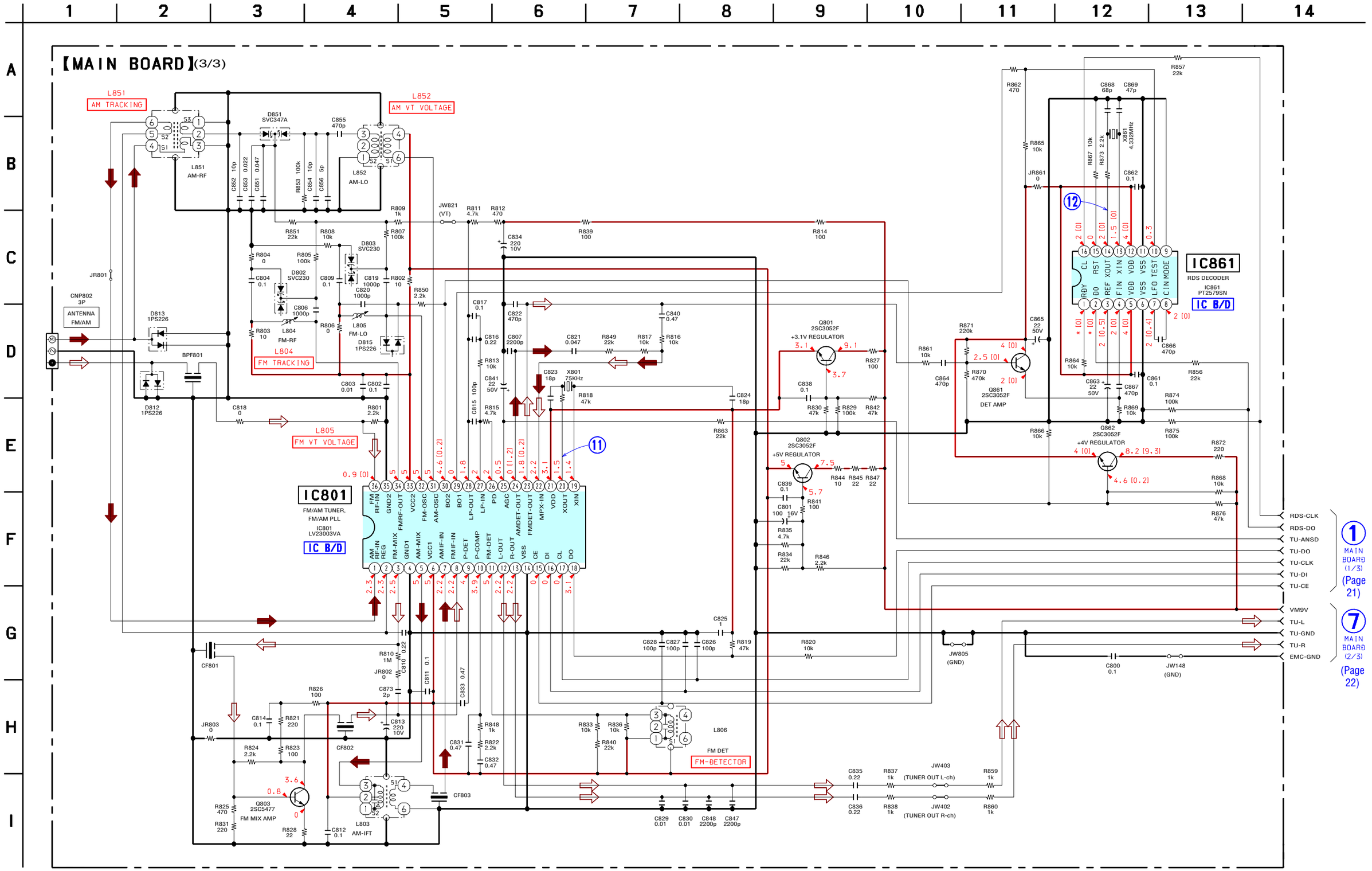
• See page 26 for IC Block Diagrams.




Refer to SUPPLEMENT-1 for the MAIN section of printed wiring boards and schematic diagrams of US, Canadian, Singapore, Taiwan, Korean and Australian models.
When repairing the set of AEP, UK, East European and Russian, refer to either of original service manual/SUPPLEMENT-1 according to the set.

## 7-9. SCHEMATIC DIAGRAM – MAIN Section (3/3) –

• See page 17 for Waveforms. • See page 26 for IC Block Diagrams.




Refer to SUPPLEMENT-1 for the MAIN section of printed wiring boards and schematic diagrams of US, Canadian, Singapore, Taiwan, Korean and Australian models.
When repairing the set of AEP, UK, East European and Russian, refer to either of original service manual/SUPPLEMENT-1 according to the set.

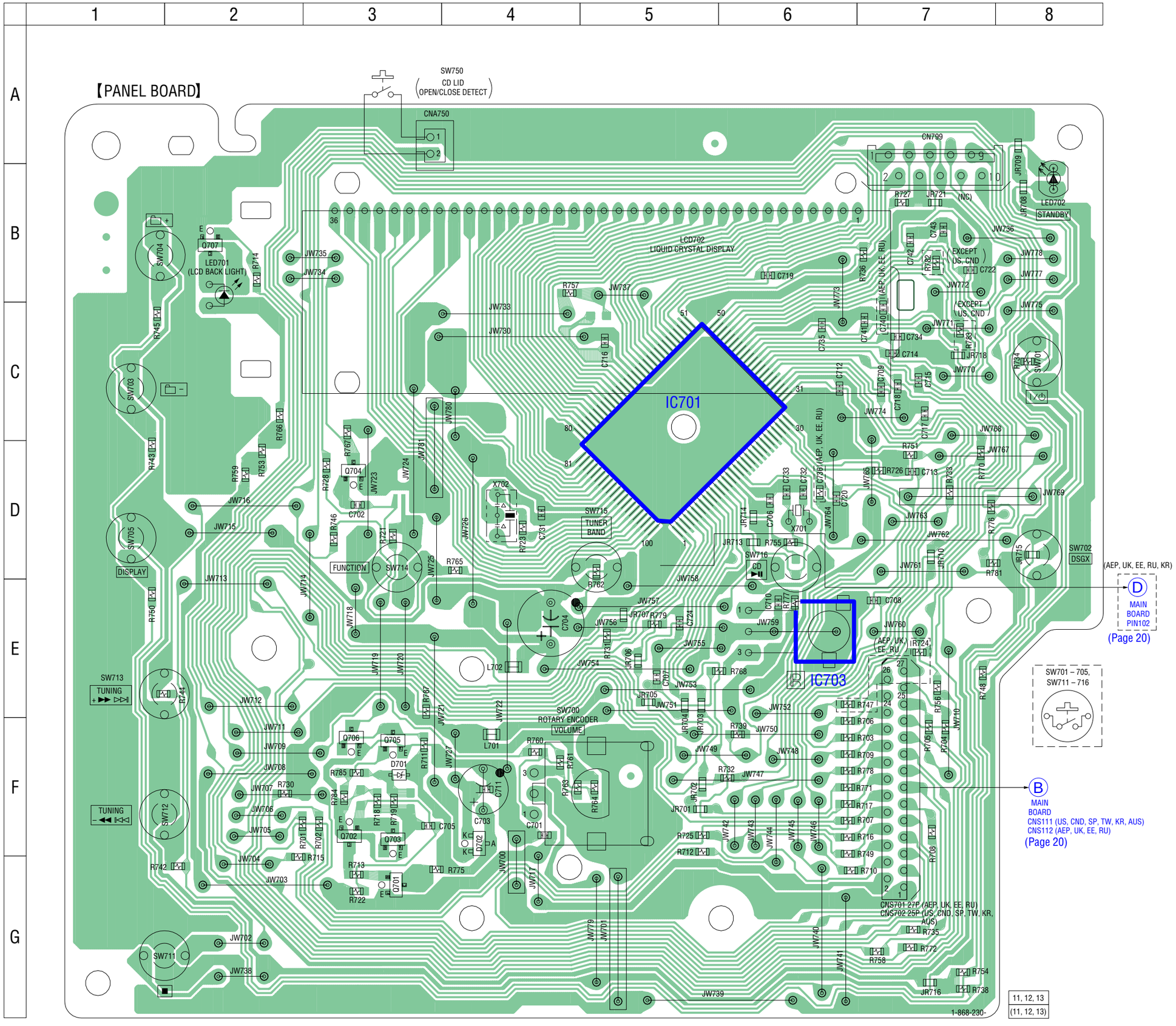
## 7-10. PRINTED WIRING BOARD – PANEL Board –

• See page 17 for Circuit Boards Location.

: Uses unleaded solder.

• **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D701 | F-3 |
| D702 | F-4 |
| IC701 | C-5 |
| IC703 | E-6 |
| LED701 | B-2 |
| LED702 | B-8 |
| Q701 | G-3 |
| Q702 | F-3 |
| Q703 | F-3 |
| Q704 | D-3 |
| Q705 | F-3 |
| Q706 | F-3 |
| Q707 | B-2 |



## 7-11. SCHEMATIC DIAGRAM – PANEL Board –

• See page 17 for Waveforms. • See page 31 for IC Pin Function Description.

【PANEL BOARD】

IC701
SYSTEM CONTROLLER
IC701
MB90802-107

IC703
REMOTE CONTROL RECEIVER
IC703
RPM7240-H18

LCD702
91X43296-B01

Q701-703
+4V REGULATOR

Q705,706
VOLTAGE DETECT

CNS701 27P(AEP,UK,EE,RU)
CNS702 25P(US,CND,SP,TW,KR,AUS)

(AEP,UK,EE,RU)

I-RDS-SC R724 1k I-RDS-SC
I-RDS-SD R747 1k I-RDS-SD
O-TU-CE R704 1k O-TU-CE
O-TU_DI R706 1k O-TU-DI
O-TU-CK R705 1k O-TU-CK
I-TU_ANSD R703 4.7k I-TU-ANSD
I-TU-DO R756 1k I-TU-DO
O-CD-CLK R709 1k
O-CD-CMD R776 1k
O-CLK-MP3 R778 1k
I/O-DATA-MP3 R772 1k
O-DR-MUTE R771 1k
O-CD-XLAT R758 1k
O-REQ-MP3 R717 1k
O-XLAT-MP3 R735 1k
I-ACK-MP3 R707 1k I-ACK-MP3
I-CD-SCOR R708 1k I-CD-SCOR
I-CD-SENS R716 1k
I-REQ-MP3 R715 1k I-REQ-MP3
O-CD-XTACN R749 1k O-CD-XTACN
O-FUNC-SD R701 1k
I-TP_STATE R710 4.7k I-TP_STATE
O-AMP-ON R702 100
O-POWER R725 10k
I-P-MONI R712 4.7k I-P-MONI
VSTBY
U-GND

(B) MAIN BOARD (1/3) CNS111 (US,CND,SP,TW,KR,AUS) CNS112 (AEP,UK,EE,RU) (Page 21)

(D) MAIN BOARD PIN102 (AEP,UK,EE,RU,KR) (Page 21)

SW700 ROTARY ENCODER VOLUME

SW716 CD
SW715 TUNER BAND
SW714 FUNCTION
SW713 TUNING +
SW712 TUNING -
SW711
SW701
SW705 DISPLAY
SW704
SW703
SW702 DSGX

SW750 CD LID OPEN/CLOSE DETECT

LED701 SELU2B10A-S (LCD BACK LIGHT)
LED702 SLR-342VRT32 STANDBY

Q701 2SA1235F
Q702 2SC3052F
Q703 2SC3052F
Q704 RT1N441C RESET SWITCH
Q705 2SC3052F
Q706 2SC3052F
Q707 2SC3052F LED DRIVE

D701 UDZW-TE17-3.6B
D702 MC2836

X701 32.768Hz
X702 4.19MHz

*R781 10k(US,CND) 100k(EXCEPT US,CND)
*R782 0(AEP,UK,EE,RU) 10k(SP,TW,KR,AUS)
*R783 10k(AEP,UK,EE,RU) 22k(SP,TW,KR,AUS)

(EXCEPT US,CND)
(AEP,UK,EE,RU)

JW700
JW701

I-RDS-SD
SI
SC
SO

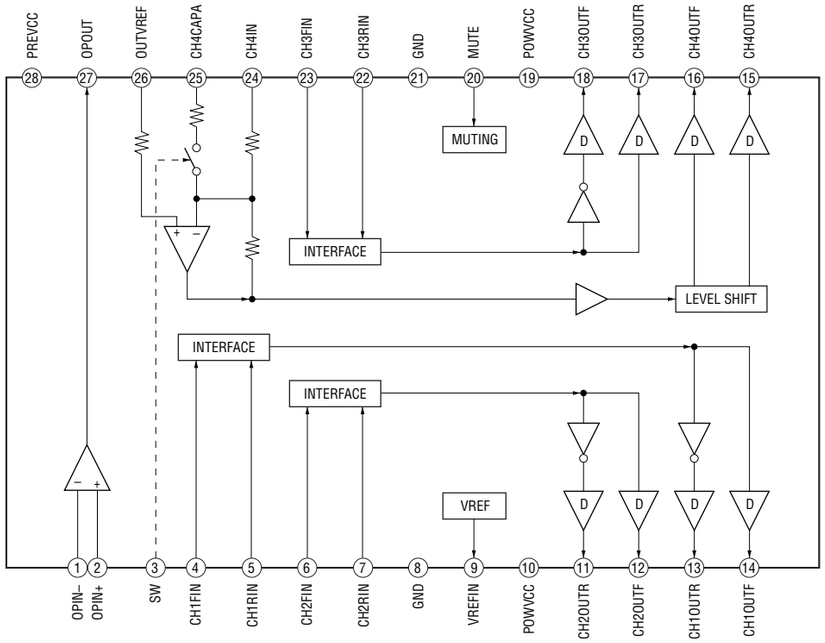
RST
MD0
MD2
P66
P65
SO
SI
SC

CN799 10P
CNA750 2P
(NC)

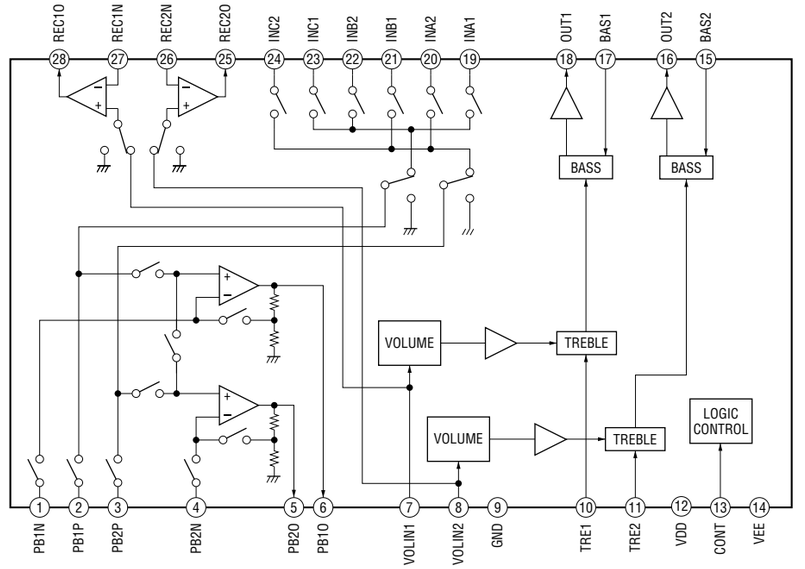
- **IC Block Diagrams**

**– CD Board –**

**IC402 BA5947FM-E2**

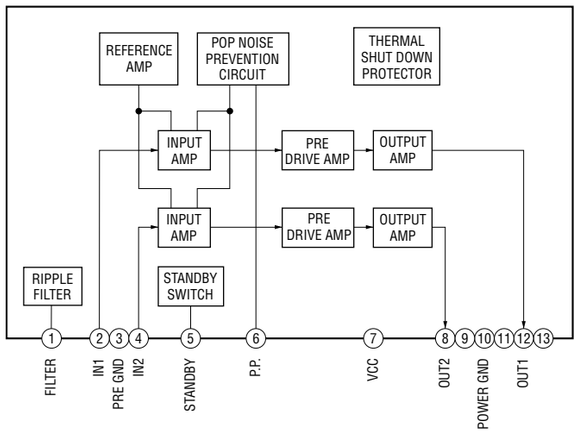



**IC401 BD3881FV**

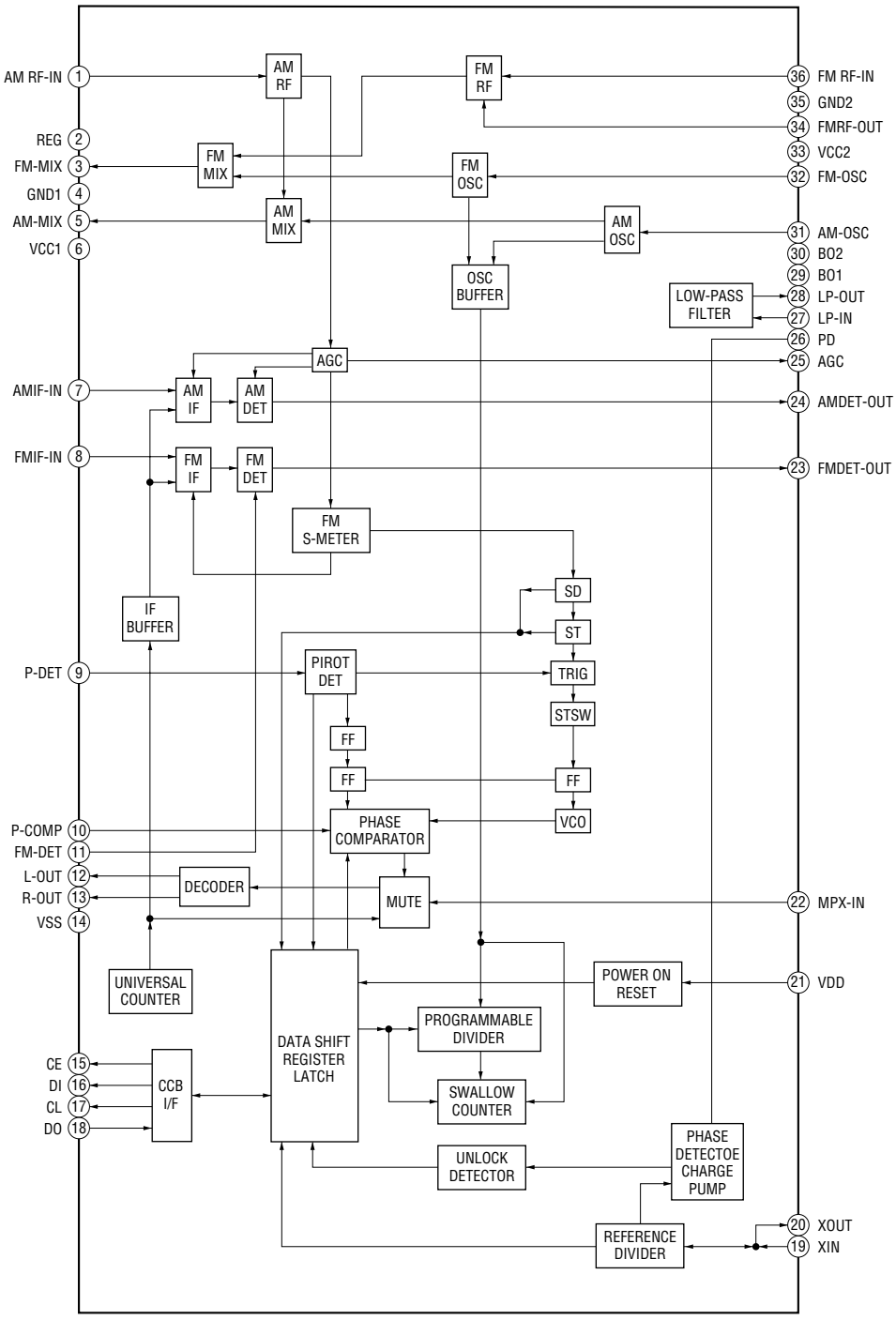



**– MAIN Board –**

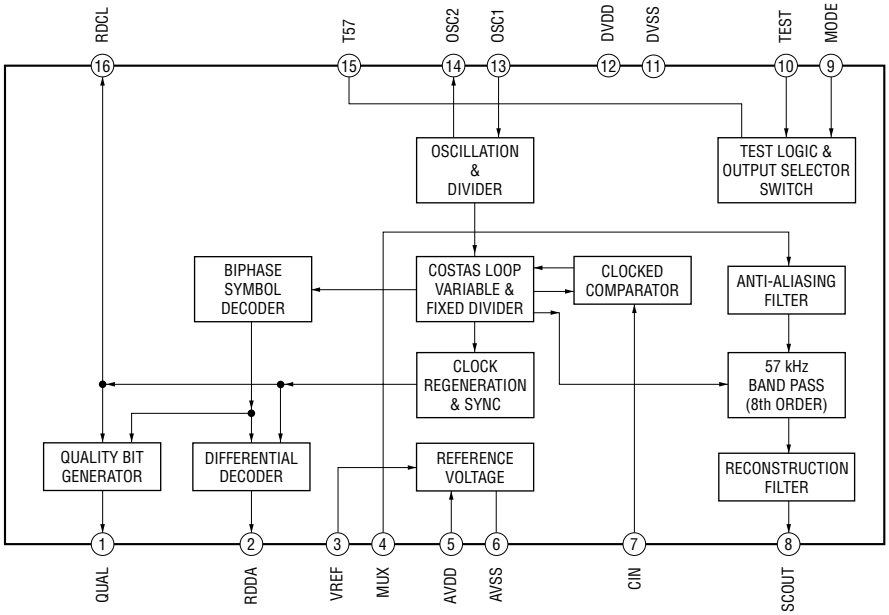
**IC301 LA4631-E**



## IC801 LV23003VA



## IC861 PT2579SN



• **IC PIN FUNCTION DESCRIPITION**

**CD BOARD IC201 CXD3014A-201R (CD DSP)**

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | LRCK | O | L/R sampling clock signal output terminal |
| 2 | LRCKI | I | L/R sampling clock signal input terminal |
| 3 | PCMD | O | Serial data output terminal |
| 4 | PCMDI | I | Serial data input terminal |
| 5 | BCK | O | Bit clock signal output terminal |
| 6 | BCKI | I | Bit clock signal input terminal |
| 7 | XTACN | I | Oscillation circuit on/off switch control signal input from the system controller<br>"L": oscillation stop, "H": self-oscillation |
| 8 | XRST | I | System reset signal input from the system controller "L": reset |
| 9 | VSS | - | Ground terminal |
| 10 | IREQ-MP3 | O | MP3 data request signal output to the system controller |
| 11 | CLOK | I | CD serial data transfer clock signal input from the system controller |
| 12 | DATA2 | I | MP3 serial data input/output with the system controller |
| 13 | XLAT-MP3 | I | MP3 serial data latch pulse signal input from the system controller |
| 14 | REQ-MP3 | I | MP3 data request signal input from the system controller |
| 15 | ACK-MP3 | O | MP3 acknowledge signal output to the system controller |
| 16 | XLAT | I | CD serial data latch pulse signal input from the system controller |
| 17 | VDD | - | Power supply terminal (+1.8V) |
| 18 | SVSS | - | Ground terminal |
| 19 | SVDD | - | Power supply terminal (+1.8V) |
| 20 | SENS | O | Internal status (SENSE) signal output to the system controller |
| 21 | WFCK | - | Not used |
| 22 | XUGF | - | Not used |
| 23 | XPCK | - | Not used |
| 24 | GFS | - | Not used |
| 25 | C2PO | - | Not used |
| 26 | SCOR | O | Subcode sync (S0+S1) detection signal output to the system controller |
| 27 | VDD | - | Power supply terminal (+1.8V) |
| 28 | COUT | - | Not used |
| 29 | SVSS | - | Ground terminal |
| 30 | SVDD | - | Power supply terminal (+1.8V) |
| 31 | MIRR | - | Not used |
| 32 | DFCT | - | Not used |
| 33 | FOK | - | Not used |
| 34 | VSS | - | Ground terminal |
| 35 | VDD | - | Power supply terminal (+1.8V) |
| 36 | VSS | - | Ground terminal |
| 37 | MIRR | - | Not used |
| 38 | MDP | O | Spindle motor servo control signal output terminal |
| 39 | SSTP | I | Disc inner position detection signal input terminal |
| 40 | IOVSS1 | - | Ground terminal |
| 41 | SFDR | O | Sled servo drive signal (+) output to the coil/motor driver |
| 42 | SRDR | O | Sled servo drive signal (-) output to the coil/motor driver |
| 43 | TFDR | O | Tracking servo drive signal (+) output to the coil/motor driver |
| 44 | TRDR | O | Tracking servo drive signal (-) output to the coil/motor driver |
| 45 | FFDR | O | Focus servo drive signal (+) output to the coil/motor driver |
| 46 | FRDR | O | Focus servo drive signal (-) output to the coil/motor driver |
| 47 | IOVDD1 | - | Power supply terminal (+3.3V) |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 48 | AVDD0 | - | Power supply terminal (+3.3V) |
| 49 | AVSS0 | - | Ground terminal |
| 50 | E | I | E signal input from the optical pick-up block |
| 51 | F | I | F signal input from the optical pick-up block |
| 52 | TEI | I | Tracking error signal input terminal |
| 53 | TEO | O | Tracking error signal output terminal |
| 54 | FEI | I | Focus error signal input terminal |
| 55 | FEO | O | Focus error signal output terminal |
| 56 | VC | O | Middle point voltage output terminal |
| 57 | A | I | A signal input from the optical pick-up block |
| 58 | B | I | B signal input from the optical pick-up block |
| 59 | C | I | C signal input from the optical pick-up block |
| 60 | D | I | D signal input from the optical pick-up block |
| 61 | AVDD4 | - | Power supply terminal (+3.3V) |
| 62 | RFDCO | O | Not used |
| 63 | PDSENS | I | Not used |
| 64 | AC_SUM | O | RFAC summing amplifier signal output terminal |
| 65 | EQ_IN | I | RF equalizer circuit input terminal |
| 66 | LD | O | Laser diode on/off control signal output to the automatic power control circuit<br>"L": laser off, "H": laser on |
| 67 | PD | I | Light amount monitor input from the optical pick-up block laser diode |
| 68 | RFC | I | Equalizer cut off frequency adjustment terminal |
| 69 | AVSS4 | - | Ground terminal |
| 70 | RFACO | O | EFM signal output terminal |
| 71 | RFACI | I | EFM signal input terminal |
| 72 | AVDD3 | - | Power supply terminal (+3.3V) |
| 73 | BIAS | I | Asymmetry circuit constant current input terminal |
| 74 | ASYI | I | Playback EFM asymmetry comparator voltage input terminal |
| 75 | ASYO | O | Playback EFM full-swing output terminal |
| 76 | VPCO | O | Charge pump output terminal for broad-band EFM PLL |
| 77 | VCTL | I | VCO2 control voltage input terminal for broad-band EFM PLL |
| 78 | AVSS3 | - | Ground terminal |
| 79 | CLTV | I | VCO1 control voltage input terminal for multiplier |
| 80 | FILO | O | Filter output terminal for master PLL |
| 81 | FILI | I | Filter input terminal for master PLL |
| 82 | PCO | O | Charge pump output terminal for master PLL |
| 83 | SVSS | - | Ground terminal |
| 84 | SVDD | - | Power supply terminal (+1.8V) |
| 85 | SSTB-MP3 | I | MP3 standby on/off control signal input terminal "L": standby Not used |
| 86 | VDD | - | Power supply terminal (+1.8V) |
| 87 | VSS | - | Ground terminal |
| 88 | TEST1 | I | Test terminal Normally: fixed at "L" |
| 89 | DATA | I | CD serial data input from the system controller |
| 90 | CLK2 | I | MP3 serial data transfer clock signal input from the system controller |
| 91 | SVSS | - | Ground terminal |
| 92 | SVDD | - | Power supply terminal (+2.5V) |
| 93 | JTAGTCK | - | Not used |
| 94 | JTAGTDI | - | Not used |
| 95 | JTAGTDO | - | Not used |
| 96 | JTAGTMS | - | Not used |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 97 | TRST | - | Not used |
| 98 | VSS | - | Ground terminal |
| 99 | VDD | - | Power supply terminal (+1.8V) |
| 100 | IOVDD2 | - | Power supply terminal (+3.3V) |
| 101 | DOUT | O | Digital audio signal output terminal Not used |
| 102 | TEST | I | Test terminal Normally: fixed at "L" |
| 103 | TES1 | I | Test terminal Normally: fixed at "L" |
| 104 | IOVSS2 | - | Ground terminal |
| 105 | PLLVDD | - | Power supply terminal (+1.8V) |
| 106 | PLLVSS | - | Ground terminal |
| 107 | XVSS | - | Ground terminal |
| 108 | XTAO | O | System clock output terminal (16.9344 MHz) |
| 109 | XTAI | I | System clock input terminal (16.9344 MHz) |
| 110 | XVDD | - | Power supply terminal (+1.8V) |
| 111 | AVDD1 | - | Power supply terminal (+3.3V) |
| 112 | AOUT1 | O | L-ch analog audio signal output terminal |
| 113 | VREFL | O | L-ch reference voltage output terminal |
| 114 | AVSS1 | - | Ground terminal |
| 115 | AVSS2 | - | Ground terminal |
| 116 | VREFR | O | R-ch reference voltage output terminal |
| 117 | AOUT2 | O | R-ch analog audio signal output terminal |
| 118 | AVDD1 | - | Power supply terminal (+3.3V) |
| 119 | IOVDD0 | - | Power supply terminal (+3.3V) |
| 120 | IOVSS0 | - | Ground terminal |

**PANEL BOARD IC701 MB90802-107 (SYSTEM CONTROLLER)**

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | P24 | O | Main power on/off control signal output terminal "H": on |
| 2 | P25 | O | Standby control signal output to the power amplifier and system reset signal output to the CD DSP |
| 3 | P26 | - | Not used |
| 4 | P27 | O | Serial data output to the electrical volume |
| 5 | SO3 | O | MP3 serial data output to the CD DSP |
| 6 | SC3 | O | MP3 serial data transfer clock signal output to the CD DSP |
| 7 | SI3 | I | MP3 serial data input terminal |
| 8 | TMCK | O | CD serial data latch pulse signa output to the CD DSP |
| 9 | IC0 | I | Remote control signal input from the remote control receiver |
| 10 | IC1 | O | MP3 serial data latch pulse signal output to the CD DSP |
| 11 | OCU0 | O | System reset signal output to the motor/coil driver |
| 12 | OCU1 | O | MP3 data request signal output to the CD DSP |
| 13 | X0A | I | Sub system clock input terminal (32.768 kHz) |
| 14 | X1A | O | Sub system clock output terminal (32.768 kHz) |
| 15 | VCC | - | Power supply terminal (+3.1V) |
| 16 | VSS | - | Ground terminal |
| 17 | LED0 | O | LED drive signal output terminal for STANDBY indicater |
| 18 to 24 | LED1 to LED7 | O | Not used |
| 25, 26 | TIN0, TIN1 | O | Not used |
| 27 | TIN2 | I | RDS serial data input terminal (AEP, East European, Russian models) |
| 28 | PPG1 | I | CD lid open/close detection switch input terminal "L": CD lid close |
| 29 | SI0 | I | Internal status (SENSE) signal input from the CD DSP |
| 30 | SC0 | O | CD serial data transfer clock signal output to the CD DSP |
| 31 | SO0 | O | CD serial data output to the CD DSP |
| 32 | AVCC | - | Power supply terminal (+3.1V) |
| 33 | SI1 | I | Serial data input from the FM/AM tuner |
| 34 | P76 | O | Oscillator control signal output to the CD DSP |
| 35 | AVSS | - | Ground terminal |
| 36 | AN0 | I | Power monitor input terminal |
| 37, 38 | AN1, AN2 | I | Front panel key input terminal (A/D input) |
| 39 | AN3 | I | Auto gain control signal input terminal |
| 40 | AN4 | I | REC switch signal input terminal |
| 41 | AN5 | I | Front panel key input terminal (A/D input) |
| 42 | AN6 | - | Not used |
| 43 | AN7 | I | Subcode sync (S0+S1) detection signal input from the CD DSP |
| 44 | VSS | - | Ground terminal |
| 45 | INT3 | I | RDS serial data transfer clock signal input terminal (AEP, East European, Russian models) |
| 46 | SC1 | O | LED drive signal output terminal for liquid crystal display back light |
| 47 | SO1 | I | Model destination setting terminal |
| 48 | SI2 | I | Dial pulse input of the rotary encoder (for VOLUME control) |
| 49 | SC2 | I | MP3 data request signal input from the CD DSP |
| 50 | SO2 | I | MP3 acknowledge signal input from the CD DSP |
| 51 to 53 | MD2 to MD0 | - | Not used |
| 54 | RSTX | I | Reset signal input from the reset switch "L": reset<br>For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H" |
| 55 | V0 | O | Chip enable signal output to the FM/AM tuner |

| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 56 | V1 | O | serial data transfer clock signal output to the FM/AM tuner |
| 57 | V2 | O | Serial data output to the FM/AM tuner |
| 58 | V3 | - | Terminal for doubler circuit capacitor connection to develop liquid crystal display drive voltage |
| 59 to 62 | COM0 to COM3 | O | Common drive signal output to the liquid crystal display |
| 63, 64 | SEG0, SEG1 | O | Segment drive signal output to the liquid crystal display |
| 65 | VCC | - | Power supply terminal (+3.1V) |
| 66 | GND | - | Ground terminal |
| 67 to 89 | SEG2 to SEG24 | O | Segment drive signal output to the liquid crystal display |
| 90 | VCC | - | Power supply terminal (+3.1V) |
| 91 | VSS | - | Ground terminal |
| 92 | X1 | I | Main system clock output terminal (4.19 MHz) |
| 93 | X0 | O | Main system clock input terminal (4.19 MHz) |
| 94 to 100 | SEG25 to SEG31 | O | Segment drive signal output to the liquid crystal display |

# SECTION 8
# EXPLODED VIEWS

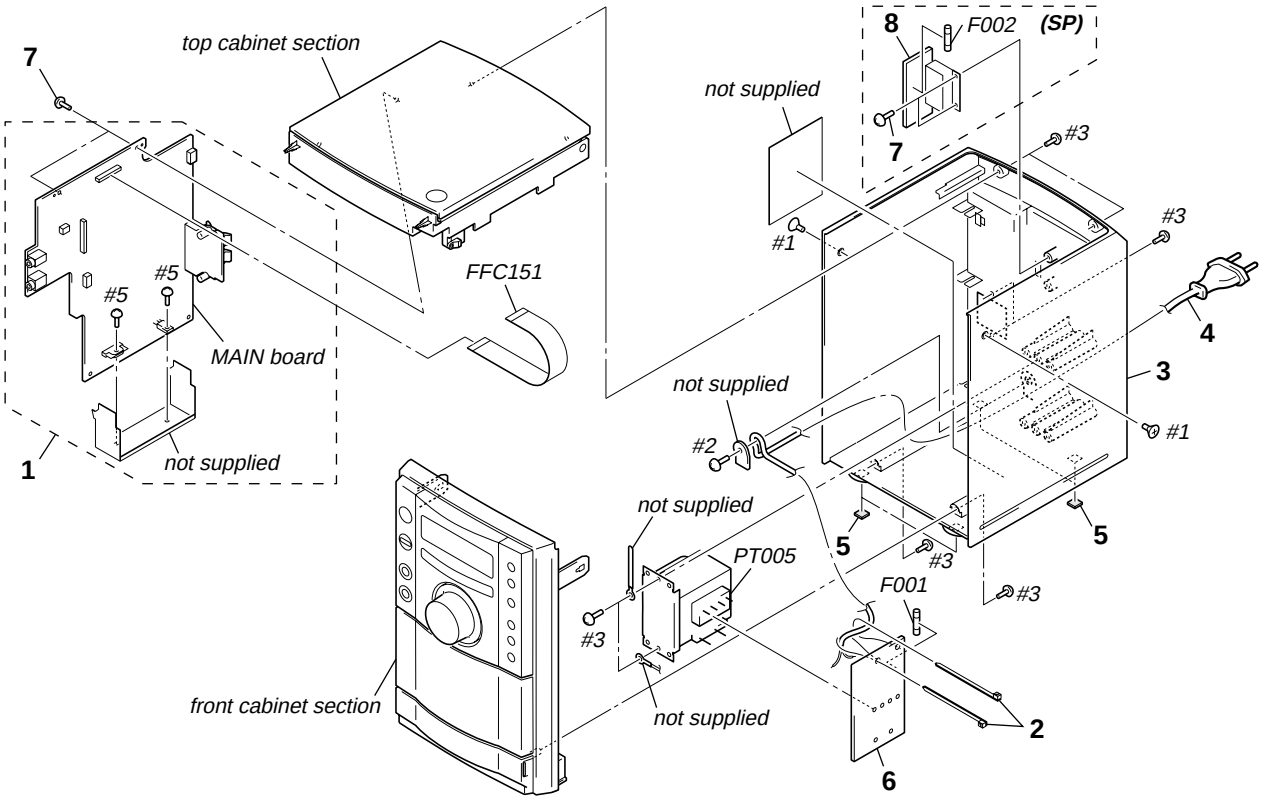
**NOTE:**

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
  AUS : Australian model EE : East European model RU : Russian model TW : Taiwan model
  CND : Canadian model KR : Korean model SP : Singapore model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

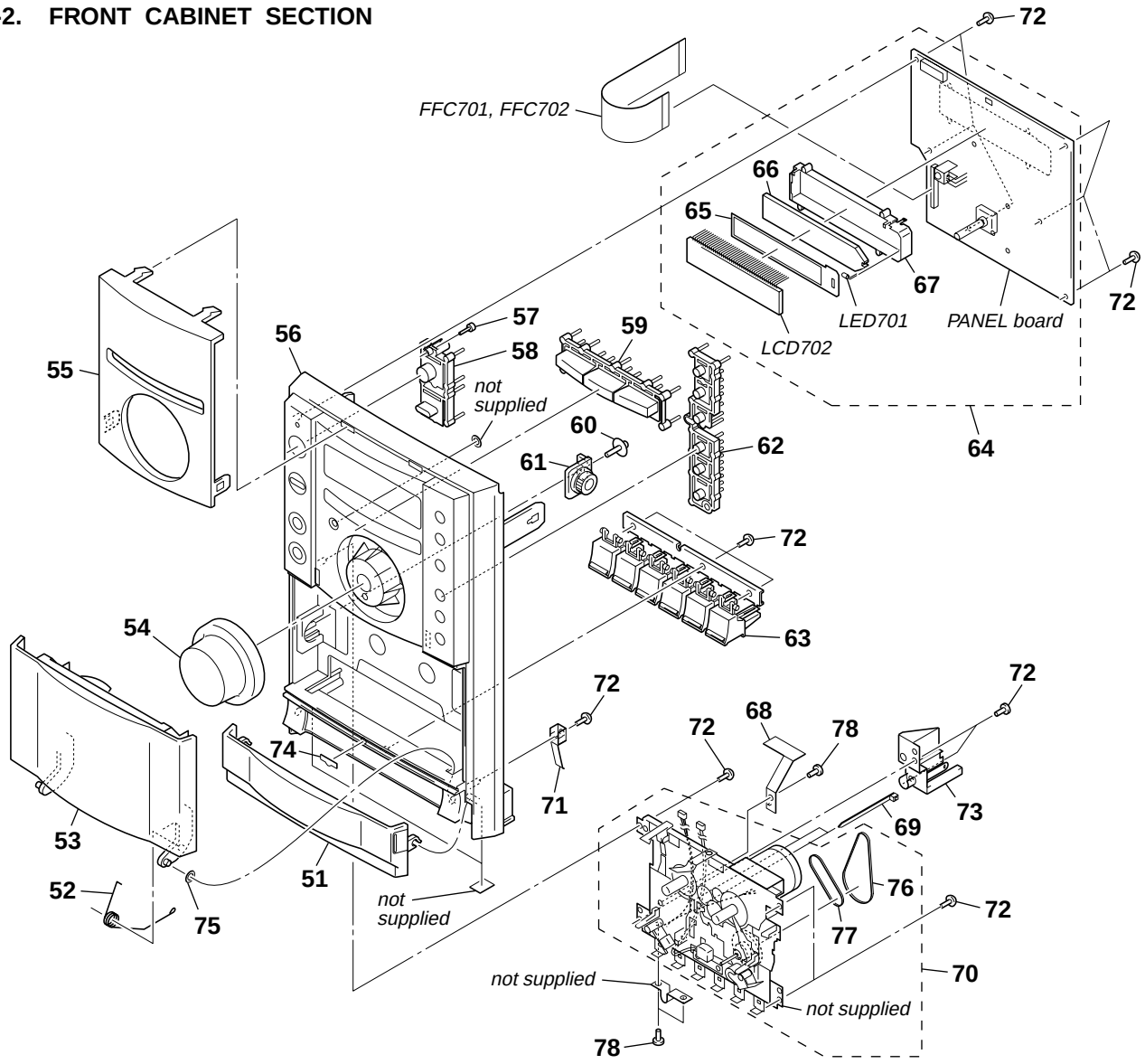
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

## 8-1. OVERALL SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 1 | A-1138-536-A | MAIN BOARD, COMPLETE (AEP, UK, EE, RU) | |
| 1 | A-1158-524-A | MAIN BOARD, COMPLETE (US, CND) | |
| 1 | A-1158-531-A | MAIN BOARD, COMPLETE (KR) | |
| 1 | A-1158-537-A | MAIN BOARD, COMPLETE (AUS) | |
| 1 | A-1158-540-A | MAIN BOARD, COMPLETE (SP) | |
| 1 | A-1169-746-A | MAIN BOARD, COMPLETE (TW) | |
| 2 | 3-701-748-00 | CLAMP | |
| 3 | 2-636-516-01 | CABINET, REAR | (AEP, UK, EE, RU, TW, KR, AUS) |
| 3 | 2-636-516-11 | CABINET, REAR (US) | |
| 3 | 2-636-516-21 | CABINET, REAR (CND) | |
| 3 | 2-636-516-31 | CABINET, REAR (SP) | |
| ⚠4 | 1-769-079-51 | CORD, POWER (KR) | |
| ⚠4 | 1-775-790-81 | CORD, POWER (AUS) | |
| ⚠4 | 1-790-757-51 | CORD, POWER (US, CND) | |
| ⚠4 | 1-827-597-81 | CORD, POWER (TW) | |
| ⚠4 | 1-830-891-11 | CORD, POWER (UK) | |
| ⚠4 | 1-831-370-11 | CORD, POWER (AEP, EE, RU, SP) | |
| 5 | 4-247-752-01 | FOOT, RUBBER | |
| 6 | A-1138-529-A | PT-AC BOARD, COMPLETE (EXCEPT SP, TW) | |
| 6 | A-1158-541-A | PT-AC BOARD, COMPLETE (SP) | |
| 6 | A-1169-744-A | PT-AC BOARD, COMPLETE (TW) | |
| 7 | 4-951-620-01 | SCREW (2.6X8), +BVTP | |
| 8 | A-1158-542-A | AC-SW BOARD, COMPLETE (SP) | |
| ⚠F001 | 1-532-275-33 | FUSE (T0.16AL/250V) | (AEP, UK, EE, RU, KR, AUS) |
| ⚠F001 | 1-532-467-33 | FUSE (T0.315AL/250V) (US, CND, SP, TW) | |
| ⚠F002 | 1-532-275-33 | FUSE (T0.16AL/250V) (SP) | |
| FFC151 | 1-832-627-21 | CABLE, FLEXIBLE FLAT (23 CORE) | |
| ⚠PT005 | 1-443-829-11 | TRANSFORMER, POWER (AEP, UK, EE, RU) | |
| ⚠PT005 | 1-443-856-11 | TRANSFORMER, POWER (US, CND) | |
| ⚠PT005 | 1-443-857-11 | TRANSFORMER, POWER (KR) | |
| ⚠PT005 | 1-443-858-11 | TRANSFORMER, POWER (SP, TW, AUS) | |
| #1 | 7-685-246-19 | SCREW +KTP 3X8 TYPE2 NON-SLIT | |
| #2 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 IT-3 | |
| #3 | 7-685-647-79 | SCREW +BVTP 3X10 TYPE2 IT-3 | |
| #5 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 IT-3 | (US, CND, AEP, UK, EE, RU) |
| #5 | 7-685-647-79 | SCREW +BVTP 3X10 TYPE2 IT-3 | (KR, SP, TW, AUS) |

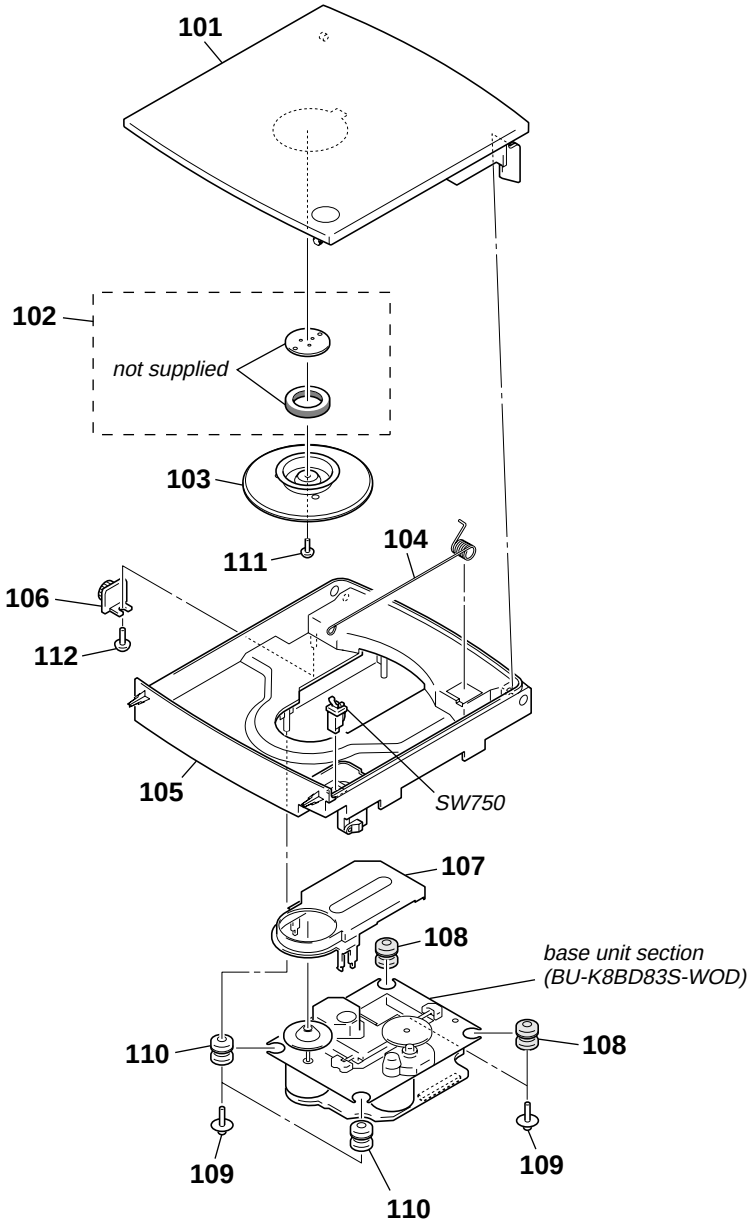
## 8-2. FRONT CABINET SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 51 | 2-636-520-01 | COVER (C), BUTTON | |
| 52 | 2-637-768-01 | SPRING (CASSETTE) | |
| 53 | 2-636-517-01 | LID, CASSETTE | |
| 54 | 2-636-527-01 | KNOB (VOL) | |
| 55 | 2-636-519-01 | WINDOW (DISPLAY) (AEP, UK, EE, RU) | |
| 55 | 2-636-519-11 | WINDOW (DISPLAY) (US, CND, SP, TW, KR, AUS) | |
| 56 | 2-636-514-01 | CABINET, FRONT (EXCEPT US) | |
| 56 | 2-636-514-11 | CABINET, FRONT (US) | |
| 57 | 2-636-533-01 | INDICATOR (POWER) | |
| 58 | 2-636-523-01 | BUTTON (POWER) | |
| 59 | 2-636-521-01 | BUTTON (FUNCTION) | |
| 60 | 3-252-828-01 | SCREW (B2.6), (+) PWH TAPPING | |
| 61 | 3-047-468-51 | DAMPER | |
| 62 | 2-636-525-01 | BUTTON (OPERATION) | |
| 63 | 2-636-522-01 | BUTTON (CASSETTE) (●, ►, ◄◄, ►►, ■ ⏏, ❚❚) | |
| 64 | A-1138-541-A | PANEL BOARD, COMPLETE (AEP, UK, EE, RU) | |
| 64 | A-1158-525-A | PANEL BOARD, COMPLETE (US, CND) | |
| 64 | A-1158-532-A | PANEL BOARD, COMPLETE (SP, TW, KR, AUS) | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 65 | 2-636-545-01 | SHEET (LCD) | |
| 66 | 2-636-532-01 | ILLUMINATOR (LCD) | |
| 67 | 2-636-531-01 | HOLDER (LCD) | |
| 68 | 2-636-546-01 | LEVER (REC) | |
| 69 | 3-701-748-00 | CLAMP | |
| 70 | 1-797-374-11 | DECK, MECHANICAL (H-21SB) | |
| 71 | 2-636-526-01 | SPRING BUTTON COVER (C) | |
| 72 | 4-951-620-01 | SCREW (2.6X8), +BVTP | |
| 73 | 2-636-524-01 | HOLDER, PWB | |
| 74 | 2-663-087-01 | SHEET (AZIMUTH) | |
| 75 | 2-663-694-01 | WASHER | |
| 76 | 2-670-389-01 | BELT (1) | |
| 77 | 2-670-390-01 | BELT (2) | |
| 78 | 3-254-022-01 | SCREW | |
| FFC701 | 1-832-634-21 | CABLE, FLEXIBLE FLAT (25 CORE) (US, CND, SP, TW, KR, AUS) | |
| FFC702 | 1-832-644-21 | CABLE, FLEXIBLE FLAT (27 CORE) (AEP, UK, EE, RU) | |
| LCD702 | 1-805-941-12 | DISPLAY PANEL, LIQUID CRYSTAL | |
| LED701 | 6-501-139-01 | LED SELU2B10A-SLF62 (LCD BACK LIGHT) | |

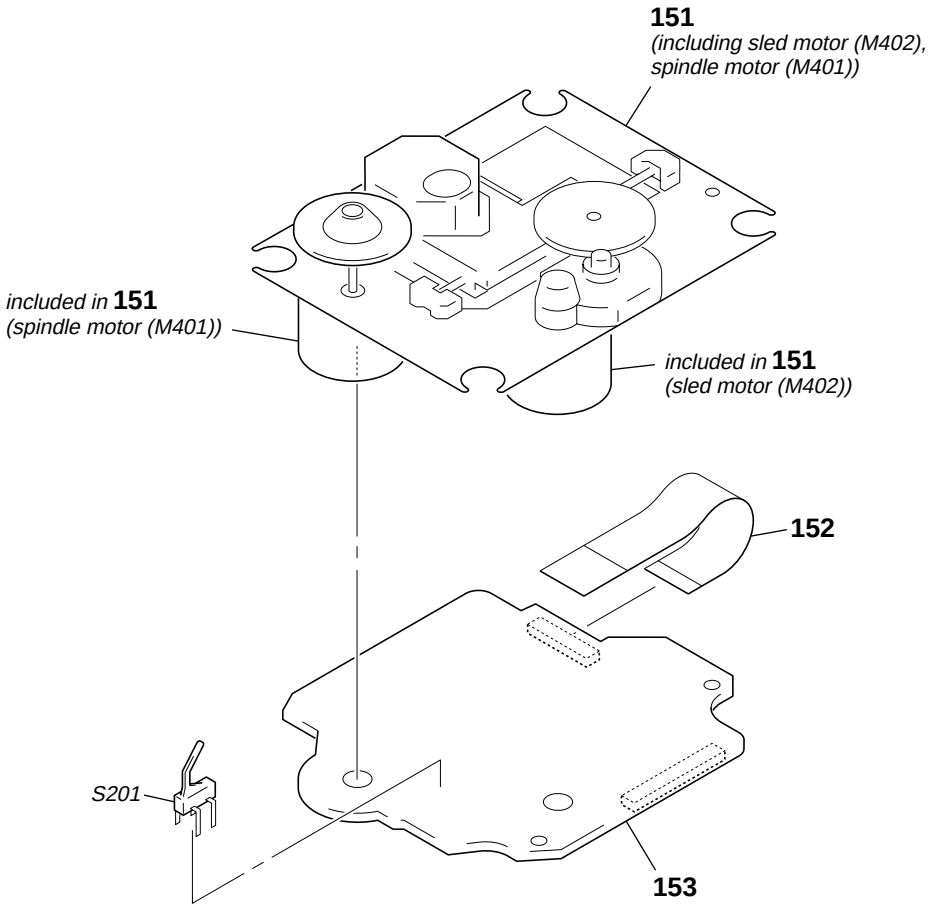
## 8-3. TOP CABINET SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 101 | 2-636-518-01 | LID, CD | |
| 102 | 1-452-899-11 | MAGNET | |
| 103 | 3-019-395-01 | PLATE, CHUCKING | |
| 104 | 2-637-769-01 | SPRING (CD) | |
| 105 | 2-636-515-01 | CABINET, TOP (EXCEPT US) | |
| 105 | 2-636-515-11 | CABINET, TOP (US) | |
| 106 | 3-047-468-11 | DAMPER | |
| 107 | 4-247-493-01 | COVER, CD | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 108 | 3-931-379-21 | RUBBER, VIBRATION PROOF (RED) | |
| 109 | 3-252-828-01 | SCREW (B2.6), (+) PWH TAPPING | |
| 110 | 3-931-379-31 | RUBBER, VIBRATION PROOF (GREEN) | |
| 111 | 3-253-143-01 | SCREW (B2.6), (+) P TAPPING | |
| 112 | 4-951-620-01 | SCREW (2.6X8), +BVTP | |
| SW750 | 1-692-960-11 | SWITCH, PUSH (1 KEY) | (CD LID OPEN/CLOSE DETECT) |

## 8-4. BASE UNIT SECTION (BU-K8BD83S-WOD)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| ⚠151 | 8-820-126-01 | OPTICAL PICK-UP BLOCK (KSM-213CDP/C2NP) (Including sled motor (M402), spindle motor (M401)) | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 152 | 1-832-404-21 | CABLE, FLEXIBLE FLAT (16 CORE) | |
| 153 | A-1134-279-A | CD BOARD, COMPLETE | |
| S201 | 1-771-853-11 | SWITCH, DETECTION (LIMIT) | |

# SECTION 9
# ELECTRICAL PARTS LIST

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA... : µA... uPA... : µPA...
  uPB... : µPB... uPC... : µPC...
  uPD... : µPD...
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- Abbreviation
  AUS : Australian model EE : East European model RU : Russian model TW : Taiwan model
  CND : Canadian model KR : Korean model SP : Singapore model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | A-1134-279-A | CD BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C101 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C102 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C103 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C104 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V |
| C105 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C107 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V |
| C108 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V |
| C109 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V |
| C110 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V |
| C111 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V |
| C112 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C113 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C201 | 1-128-995-21 | ELECT CHIP | 100uF | 20% | 10V |
| C202 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C203 | 1-128-995-21 | ELECT CHIP | 100uF | 20% | 10V |
| C204 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C205 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C206 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C207 | 1-128-995-21 | ELECT CHIP | 100uF | 20% | 10V |
| C208 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C210 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C213 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C214 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C215 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C217 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C218 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C219 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C220 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C221 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C222 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C223 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C224 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C226 | 1-165-908-11 | CERAMIC CHIP | 1uF | 10% | 10V |
| C227 | 1-165-908-11 | CERAMIC CHIP | 1uF | 10% | 10V |
| C230 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C232 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C251 | 1-164-315-11 | CERAMIC CHIP | 470PF | 5% | 50V |
| C252 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V |
| C253 | 1-164-315-11 | CERAMIC CHIP | 470PF | 5% | 50V |
| C254 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V |
| C256 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C257 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C258 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V |
| C260 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C261 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C264 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C265 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C266 | 1-162-915-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C267 | 1-162-910-11 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C268 | 1-162-915-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C271 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C272 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C273 | 1-164-315-11 | CERAMIC CHIP | 470PF | 5% | 50V |
| C274 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C275 | 1-162-910-11 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C276 | 1-165-908-11 | CERAMIC CHIP | 1uF | 10% | 10V |
| C277 | 1-165-908-11 | CERAMIC CHIP | 1uF | 10% | 10V |
| C291 | 1-164-315-11 | CERAMIC CHIP | 470PF | 5% | 50V |
| C292 | 1-164-315-11 | CERAMIC CHIP | 470PF | 5% | 50V |
| C301 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C303 | 1-137-710-11 | CERAMIC CHIP | 10uF | 20% | 6.3V |
| C304 | 1-165-908-11 | CERAMIC CHIP | 1uF | 10% | 10V |
| C321 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C322 | 1-165-908-11 | CERAMIC CHIP | 1uF | 10% | 10V |
| C323 | 1-128-995-21 | ELECT CHIP | 100uF | 20% | 10V |
| C401 | 1-128-394-11 | ELECT CHIP | 220uF | 20% | 10V |
| C404 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C405 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C406 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C424 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C451 | 1-165-176-11 | CERAMIC CHIP | 0.047uF | 10% | 16V |
| | | < CONNECTOR > | | | |
| CN301 | 1-770-425-51 | CONNECTOR, FFC/FPC 16P | | | |
| | | < IC > | | | |
| IC201 | 8-753-246-30 | IC CXD3014A-201R | | | |
| IC202 | 6-708-736-01 | IC BD18KA5FP-E2 | | | |
| IC402 | 6-705-808-01 | IC BA5947FM-E2 | | | |
| | | < TRANSISTOR > | | | |
| Q321 | 6-551-120-01 | TRANSISTOR | 2SA2119K | | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < RESISTOR/FERRITE BEAD > | | | |
| R101 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R102 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R103 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R104 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R105 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R107 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R108 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R109 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R110 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R111 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R112 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R113 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R201 | 1-216-295-00 | SHORT CHIP | 0 | | |
| R202 | 1-216-295-00 | SHORT CHIP | 0 | | |
| R203 | 1-500-445-21 | FERRITE, EMI (SMD) (2012) | | | |
| R207 | 1-216-295-00 | SHORT CHIP | 0 | | |
| R250 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/10W |
| R252 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R253 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R254 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R255 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R256 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R257 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R258 | 1-216-849-11 | METAL CHIP | 220K | 5% | 1/10W |
| R260 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R265 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R266 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R267 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R268 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R270 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R271 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/10W |
| R275 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R276 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R277 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R278 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R280 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R291 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R292 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R321 | 1-216-789-11 | METAL CHIP | 2.2 | 5% | 1/10W |
| R322 | 1-216-789-11 | METAL CHIP | 2.2 | 5% | 1/10W |
| R323 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R324 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R401 | 1-216-295-00 | SHORT CHIP | 0 | | |
| R421 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R423 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R451 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R452 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| | | < VIBRATOR > | | | |
| X201 | 1-795-101-21 | VIBRATOR, CERAMIC (16.9344MHz) | | | |
| ********** | | | | | |
| | A-1138-536-A | MAIN BOARD, COMPLETE | | | |
| | | ********** | | | |
| | 3-254-142-01 | SCREW (B3), (+) BV TAPPING | | | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < BAND PASS FILTER > | | | |
| BPF801 | 1-236-711-41 | FILTER, BAND PASS | | | |
| | | < CAPACITOR > | | | |
| C101 | 1-126-944-11 | ELECT | 3300uF | 20% | 25V |
| C105 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C109 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C110 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C111 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C112 | 1-126-943-11 | ELECT | 2200uF | 20% | 25V |
| C114 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C115 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C118 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C121 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C122 | 1-126-934-11 | ELECT | 220uF | 20% | 16V |
| C141 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C142 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C155 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C156 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C181 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C182 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C183 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C184 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C191 | 1-126-934-11 | ELECT | 220uF | 20% | 16V |
| C192 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C193 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C194 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C196 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C301 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C302 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C303 | 1-126-963-11 | ELECT | 4.7uF | 20% | 50V |
| C304 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C305 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C306 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C307 | 1-126-767-11 | ELECT | 1000uF | 20% | 16V |
| C308 | 1-126-767-11 | ELECT | 1000uF | 20% | 16V |
| C309 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C310 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C311 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C312 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C315 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C371 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C381 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C382 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C401 | 1-126-956-11 | ELECT | 0.1uF | 20% | 50V |
| C402 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C403 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C404 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C405 | 1-126-956-11 | ELECT | 0.1uF | 20% | 50V |
| C406 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C407 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V |
| C408 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V |
| C409 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C410 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C412 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C413 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |

Refer to the SUPPLEMENT-1 for the MAIN board of the except AEP, UK, East European and Russian models.

**MAIN**

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C415 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C416 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C421 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C431 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C432 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C433 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C434 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C437 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C438 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C501 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C502 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C503 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C504 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C505 | 1-165-176-11 | CERAMIC CHIP | 0.047uF | 10% | 16V |
| C506 | 1-165-176-11 | CERAMIC CHIP | 0.047uF | 10% | 16V |
| C507 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C508 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C509 | 1-126-966-11 | ELECT | 33uF | 20% | 50V |
| C510 | 1-126-966-11 | ELECT | 33uF | 20% | 50V |
| C511 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C512 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C513 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C514 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C515 | 1-162-915-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C518 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C519 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C522 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C523 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C524 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C525 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C526 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C527 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C528 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C529 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C531 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C532 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C533 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C534 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C535 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C543 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C544 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C561 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C562 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C564 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C565 | 1-115-156-11 | CERAMIC CHIP | 1uF | | 10V |
| C567 | 1-130-479-00 | MYLAR | 0.0047uF | 5% | 50V |
| C800 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C801 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C802 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C803 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C804 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C806 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C807 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C809 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C810 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C811 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C812 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C813 | 1-126-934-11 | ELECT | 220uF | 20% | 16V |
| C814 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C815 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C816 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C817 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C818 | 1-216-864-11 | SHORT CHIP | 0 | | |
| C819 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C820 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C821 | 1-165-176-11 | CERAMIC CHIP | 0.047uF | 10% | 16V |
| C822 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C823 | 1-162-918-11 | CERAMIC CHIP | 18PF | 5% | 50V |
| C824 | 1-162-918-11 | CERAMIC CHIP | 18PF | 5% | 50V |
| C825 | 1-125-837-11 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| C826 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C827 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C828 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C829 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C830 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C831 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C832 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C833 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C834 | 1-126-934-11 | ELECT | 220uF | 20% | 16V |
| C835 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C836 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C838 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C839 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C840 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C841 | 1-126-965-11 | ELECT | 22uF | 20% | 50V |
| C847 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C848 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C851 | 1-165-176-11 | CERAMIC CHIP | 0.047uF | 10% | 16V |
| C852 | 1-162-915-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C853 | 1-164-227-11 | CERAMIC CHIP | 0.022uF | 10% | 25V |
| C854 | 1-162-915-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C855 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C856 | 1-162-910-11 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C861 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C862 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C863 | 1-126-965-11 | ELECT | 22uF | 20% | 50V |
| C864 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C865 | 1-126-965-11 | ELECT | 22uF | 20% | 50V |
| C866 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C867 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C868 | 1-162-925-11 | CERAMIC CHIP | 68PF | 5% | 50V |
| C869 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C873 | 1-162-907-11 | CERAMIC CHIP | 2PF | 0.25PF | 50V |
| | | < FILTER > | | | |
| CF801 | 1-795-426-11 | FILTER, CERAMIC | | | |
| CF802 | 1-579-554-21 | FILTER, CERAMIC | | | |
| CF803 | 1-781-962-21 | FILTER, CERAMIC | | | |
| | | < CONNECTOR > | | | |
| CNP501 | 1-815-445-11 | PIN, CONNECTOR (PWB) 4P | | | |
| CNP502 | 1-815-444-11 | PIN, CONNECTOR (PWB) 3P | | | |
| * CNP802 | 1-506-680-11 | PLUG, CONNECTOR (2.5mm) 3P | | | |
| CNS104 | 1-779-291-11 | CONNECTOR, FFC (LIF (NON-ZIF)) 23P | | | |
| CNS112 | 1-779-295-11 | CONNECTOR, FFC (LIF (NON-ZIF)) 27P | | | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | < DIODE > | |
| D106 | 8-719-056-85 | DIODE UDZ-TE-17-8.2B | |
| D107 | 8-719-046-07 | DIODE 2A02M | |
| D108 | 8-719-046-07 | DIODE 2A02M | |
| D109 | 8-719-046-07 | DIODE 2A02M | |
| D110 | 8-719-046-07 | DIODE 2A02M | |
| D111 | 6-500-522-01 | DIODE 10EDB40-TA1B2 | |
| D113 | 6-500-522-01 | DIODE 10EDB40-TA1B2 | |
| D131 | 6-500-334-01 | DIODE MC2836-T112-1 | |
| D191 | 6-500-522-01 | DIODE 10EDB40-TA1B2 | |
| D192 | 6-500-522-01 | DIODE 10EDB40-TA1B2 | |
| D193 | 8-719-083-58 | DIODE UDZSTE-173.9B | |
| D371 | 6-500-335-01 | DIODE MC2838-T112-1 | |
| D372 | 6-500-335-01 | DIODE MC2838-T112-1 | |
| D802 | 6-501-369-01 | DIODE SV230-TB-E | |
| D803 | 6-501-369-01 | DIODE SV230-TB-E | |
| D812 | 8-719-062-51 | DIODE 1PS226-115 | |
| D813 | 8-719-062-51 | DIODE 1PS226-115 | |
| D815 | 8-719-062-51 | DIODE 1PS226-115 | |
| D851 | 6-501-142-01 | DIODE SVC347A-TL-E | |
| | | < IC > | |
| IC301 | 6-706-641-01 | IC LA4631-E | |
| IC401 | 6-702-895-01 | IC BD3881FV | |
| IC801 | 6-708-840-01 | IC LV23003VA | |
| IC861 | 6-708-918-01 | IC PT2579SN | |
| | | < JACK > | |
| J101 | 1-780-314-11 | TERMINAL BOARD (SPEAKERS) | |
| J102 | 1-815-629-11 | JACK (PHONES) | |
| J105 | 1-566-822-51 | JACK (AUDIO IN) | |
| | | < JUMPER RESISTOR > | |
| JR106 | 1-216-864-11 | SHORT CHIP 0 | |
| JR401 | 1-216-864-11 | SHORT CHIP 0 | |
| JR402 | 1-216-864-11 | SHORT CHIP 0 | |
| JR403 | 1-216-864-11 | SHORT CHIP 0 | |
| JR404 | 1-216-864-11 | SHORT CHIP 0 | |
| JR801 | 1-216-864-11 | SHORT CHIP 0 | |
| JR802 | 1-216-864-11 | SHORT CHIP 0 | |
| JR803 | 1-216-864-11 | SHORT CHIP 0 | |
| JR861 | 1-216-864-11 | SHORT CHIP 0 | |
| | | < COIL > | |
| L103 | 1-469-152-11 | FERRITE, EMI (SMD) (2012) | |
| L104 | 1-469-152-11 | FERRITE, EMI (SMD) (2012) | |
| L501 | 1-456-094-11 | TRANSFORMER, BIAS OSCILLATION | |
| L803 | 1-433-741-11 | TRANSFORMER, IF | |
| L804 | 1-457-163-11 | COIL, AIR-CORE | |
| L805 | 1-457-162-11 | COIL, AIR-CORE | |
| L806 | 1-457-168-11 | COIL, DET | |
| L851 | 1-457-161-11 | COIL, AM ANTENNA | |
| L852 | 1-456-596-11 | COIL, MW OSC | |
| | | < CONNECTOR > | |
| * PIN101 | 1-564-187-00 | PIN, CONNECTOR | |
| * PIN102 | 1-564-187-00 | PIN, CONNECTOR | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < TRANSISTOR > | | | |
| Q101 | 8-729-141-83 | TRANSISTOR | 2SB1094-LK | | |
| Q102 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q103 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q121 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q122 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q123 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q191 | 8-729-036-86 | TRANSISTOR | KTC3203Y-AT | | |
| Q192 | 8-729-036-86 | TRANSISTOR | KTC3203Y-AT | | |
| Q193 | 8-729-600-22 | TRANSISTOR | 2SA1235-F | | |
| Q351 | 6-550-843-01 | FET | 2SJ599-Z-E2-AZ | | |
| Q352 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q371 | 8-729-600-22 | TRANSISTOR | 2SA1235-F | | |
| Q372 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q507 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q801 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q802 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q803 | 6-550-304-01 | TRANSISTOR | 2SC5477-T122-1 | | |
| Q861 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q862 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| | | < RESISTOR > | | | |
| R101 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R102 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R103 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R104 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R105 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R106 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R107 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R108 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R109 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R110 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R111 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R112 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R115 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R116 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R117 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R118 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R119 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R120 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R121 | 1-216-849-11 | METAL CHIP | 220K | 5% | 1/10W |
| R123 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R124 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R125 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R126 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R127 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R128 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R129 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R130 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R134 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R135 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R136 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R137 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R138 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R139 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R140 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R144 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |

**MAIN**

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R145 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R146 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R147 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R148 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R149 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R150 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R151 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R152 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R175 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R176 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R181 | 1-216-797-11 | METAL CHIP | 10 | 5% | 1/10W |
| R182 | 1-216-797-11 | METAL CHIP | 10 | 5% | 1/10W |
| R185 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R186 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R187 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R188 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R189 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R191 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R192 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R193 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R195 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R196 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R197 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R198 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R199 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R301 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R302 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R303 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R304 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R305 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R306 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R307 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R308 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R339 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R340 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R351 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R352 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R353 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R354 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R355 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R356 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R365 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R371 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R372 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R373 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R374 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R375 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R376 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R377 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R378 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R379 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R380 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R381 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R382 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R383 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R384 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R402 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R403 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R404 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R405 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R406 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R410 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R411 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R412 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R419 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R420 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R423 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R424 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R425 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R426 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R427 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R428 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R429 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R430 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R433 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R434 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R439 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R440 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R441 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R442 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R501 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R502 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R503 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R504 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R505 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R506 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R507 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R508 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R509 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R510 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R511 | 1-216-861-11 | METAL CHIP | 2.2M | 5% | 1/10W |
| R512 | 1-216-861-11 | METAL CHIP | 2.2M | 5% | 1/10W |
| R513 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R514 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R515 | 1-216-805-11 | METAL CHIP | 47 | 5% | 1/10W |
| R516 | 1-216-805-11 | METAL CHIP | 47 | 5% | 1/10W |
| R517 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R518 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R519 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R520 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R521 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R522 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R523 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R524 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R525 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R526 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R527 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R528 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R529 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R530 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R531 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R532 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R533 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R534 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R535 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R536 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R541 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R542 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R543 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R544 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R545 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R560 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R561 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R564 | 1-216-793-11 | METAL CHIP | 4.7 | 5% | 1/10W |
| R565 | 1-216-793-11 | METAL CHIP | 4.7 | 5% | 1/10W |
| R801 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R802 | 1-216-797-11 | METAL CHIP | 10 | 5% | 1/10W |
| R803 | 1-216-797-11 | METAL CHIP | 10 | 5% | 1/10W |
| R804 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R805 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R806 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R807 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R808 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R809 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R810 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/10W |
| R811 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R812 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R813 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R814 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R815 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R816 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R817 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R818 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R819 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R820 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R821 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R822 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R823 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R824 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R825 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R826 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R827 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R828 | 1-216-801-11 | METAL CHIP | 22 | 5% | 1/10W |
| R829 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R830 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R831 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R833 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R834 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R835 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R836 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R837 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R838 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R839 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R840 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R841 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R842 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R843 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R844 | 1-216-797-11 | METAL CHIP | 10 | 5% | 1/10W |
| R845 | 1-216-801-11 | METAL CHIP | 22 | 5% | 1/10W |
| R846 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R847 | 1-216-801-11 | METAL CHIP | 22 | 5% | 1/10W |
| R848 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R849 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R850 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R851 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R853 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R856 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R857 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R859 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R860 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R861 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R862 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R863 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R864 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R865 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R866 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R867 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R868 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R869 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R870 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R871 | 1-216-849-11 | METAL CHIP | 220K | 5% | 1/10W |
| R872 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R873 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R874 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R875 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R876 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| | | < SWITCH > | | | |
| SW501 | 1-762-369-11 | SWITCH, SLIDE (REC/PB) | | | |
| | | < VIBRATOR > | | | |
| X801 | 1-795-926-11 | VIBRATOR, CRYSTAL (75kHz) | | | |
| X861 | 1-579-900-21 | VIBRATOR, CRYSTAL (4.332MHz) | | | |
| ********** | | | | | |
| | A-1138-541-A | PANEL BOARD, COMPLETE (AEP, UK, EE, RU) | | | |
| | A-1158-525-A | PANEL BOARD, COMPLETE (US, CND) | | | |
| | A-1158-532-A | PANEL BOARD, COMPLETE (SP, TW, KR, AUS) | | | |
| | | ********** | | | |
| | 2-636-531-01 | HOLDER, LCD | | | |
| | 2-636-532-01 | ILLUMINATOR, LCD | | | |
| | 2-636-545-01 | SHEET, LCD | | | |
| | | < CAPACITOR > | | | |
| C701 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C702 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C703 | 1-126-382-11 | ELECT | 100uF | 20% | 16V |
| C704 | 1-119-941-11 | ELECT | 470uF | 20% | 6.3V |
| C705 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C706 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C707 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C708 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C709 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C710 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C711 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C712 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C713 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C714 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C715 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C716 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C717 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C718 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C719 | 1-165-176-11 | CERAMIC CHIP | 0.047uF | 10% | 16V |
| C720 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C722 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V |
| C724 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C731 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C732 | 1-162-918-11 | CERAMIC CHIP | 18PF | 5% | 50V |
| C733 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C734 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C735 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C736 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V (AEP, UK, EE, RU) |
| C740 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V (AEP, UK, EE, RU) |
| C741 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| C742 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| C743 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| | | < CONNECTOR > | | | |
| CNS701 | 1-779-295-11 | CONNECTOR, FFC (LIF (NON-ZIF)) 27P | | | (AEP, UK, EE, RU) |
| CNS702 | 1-779-293-11 | CONNECTOR, FFC (LIF (NON-ZIF)) | | | (US, CND, SP, TW, KR, AUS) |
| | | < DIODE > | | | |
| D701 | 6-501-163-01 | DIODE UDZW-TE17-3.6B | | | |
| D702 | 6-500-334-01 | DIODE MC2836-T112-1 | | | |
| | | < IC > | | | |
| IC701 | 6-806-137-01 | IC MB90802-107 | | | |
| IC703 | 6-600-446-01 | IC RPM7240-H18 | | | |
| | | < RESISTOR > | | | |
| JR701 | 1-216-864-11 | SHORT CHIP | 0 | | |
| JR702 | 1-216-864-11 | SHORT CHIP | 0 | | |
| JR703 | 1-216-864-11 | SHORT CHIP | 0 | | |
| JR704 | 1-216-864-11 | SHORT CHIP | 0 | | |
| JR705 | 1-216-864-11 | SHORT CHIP | 0 | | |
| JR706 | 1-216-864-11 | SHORT CHIP | 0 | | |
| JR707 | 1-216-864-11 | SHORT CHIP | 0 | | |
| JR708 | 1-216-864-11 | SHORT CHIP | 0 | | |
| JR709 | 1-216-864-11 | SHORT CHIP | 0 | | |
| JR710 | 1-216-864-11 | SHORT CHIP | 0 | | |
| JR713 | 1-216-864-11 | SHORT CHIP | 0 | | |
| JR714 | 1-216-864-11 | SHORT CHIP | 0 | | |
| JR715 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| JR716 | 1-216-864-11 | SHORT CHIP | 0 | | |
| JR718 | 1-216-864-11 | SHORT CHIP | 0 | | |
| JR721 | 1-216-864-11 | SHORT CHIP | 0 | | |
| L701 | 1-216-864-11 | SHORT CHIP | 0 | | |
| L702 | 1-216-864-11 | SHORT CHIP | 0 | | |
| | | < LIQUID CRYSTAL DISPLAY > | | | |
| LCD702 | 1-805-941-12 | DISPLAY PANEL, LIQUID CRYSTAL | | | |
| | | < LED > | | | |
| LED701 | 6-501-139-01 | LED SELU2B10A-SLF62 (LCD BACK LIGHT) | | | |
| LED702 | 8-719-060-44 | LED SLR-342VRT32 (STANDBY) | | | |
| | | < TRANSISTOR > | | | |
| Q701 | 8-729-600-22 | TRANSISTOR | 2SA1235-F | | |
| Q702 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q703 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q704 | 1-801-806-11 | TRANSISTOR | DTC144EKA | | |
| Q705 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q706 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q707 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| | | < RESISTOR > | | | |
| R701 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R702 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R703 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R704 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R705 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R706 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R707 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R708 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R709 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R710 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R711 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R712 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R713 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R714 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R715 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R716 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R717 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R718 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R719 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R721 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R722 | 1-216-849-11 | METAL CHIP | 220K | 5% | 1/10W |
| R723 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R724 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W (AEP, UK, EE, RU) |
| R725 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R726 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R727 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R728 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R730 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R731 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R732 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R733 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R734 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R735 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R736 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R738 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R739 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R742 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R743 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R744 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R745 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R746 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R747 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W (AEP, UK, EE, RU) |
| R748 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R749 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R750 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R751 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R753 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R754 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R755 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R756 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R757 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R758 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R759 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R760 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R761 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R762 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R763 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R764 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R765 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R766 | 1-216-797-11 | METAL CHIP | 10 | 5% | 1/10W |
| R767 | 1-216-849-11 | METAL CHIP | 220K | 5% | 1/10W |
| R768 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R770 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R771 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R772 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R775 | 1-216-805-11 | METAL CHIP | 47 | 5% | 1/10W |
| R776 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R777 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R778 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R779 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R781 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W (US, CND) |
| R781 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W (EXCEPT US, CND) |
| R782 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W (SP, TW, KR, AUS) |
| R782 | 1-216-864-11 | SHORT CHIP | 0 (AEP, UK, EE, RU) | | |
| R783 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W (AEP, UK, EE, RU) |
| R783 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W (SP, TW, KR, AUS) |
| R784 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R785 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R787 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| | | < SWITCH > | | | |
| SW700 | 1-478-642-11 | ENCODER, ROTARY (VOLUME) | | | |
| SW701 | 1-762-875-21 | SWITCH, KEYBOARD (I/⏻) | | | |
| SW702 | 1-762-875-21 | SWITCH, KEYBOARD (DSGX) | | | |
| SW703 | 1-762-875-21 | SWITCH, KEYBOARD (🗀 –) | | | |
| SW704 | 1-762-875-21 | SWITCH, KEYBOARD (🗀 +) | | | |
| SW705 | 1-762-875-21 | SWITCH, KEYBOARD (DISPLAY) | | | |
| SW711 | 1-762-875-21 | SWITCH, KEYBOARD (■) | | | |
| SW712 | 1-762-875-21 | SWITCH, KEYBOARD (TUNING –, ◀◀ ⏮◁) | | | |
| SW713 | 1-762-875-21 | SWITCH, KEYBOARD (TUNING +, ▶▶ ▷⏭) | | | |
| SW714 | 1-762-875-21 | SWITCH, KEYBOARD (FUNCTION) | | | |
| SW715 | 1-762-875-21 | SWITCH, KEYBOARD (TUNER, BAND) | | | |
| SW716 | 1-762-875-21 | SWITCH, KEYBOARD (CD ▶II) | | | |
| | | < VIBRATOR > | | | |
| X701 | 1-760-252-12 | VIBRATOR, CRYSTAL (32.768kHz) | | | |
| X702 | 1-795-054-51 | VIBRATOR, CERAMIC (4.19MHz) | | | |

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| | | | |
|---|---|---|---|
| | A-1138-529-A | PT-AC BOARD, COMPLETE | |
| | | ********** | |
| | 1-533-233-31 | FUSE HOLDER | |
| | | < CONNECTOR > | |
| W002 | 1-819-131-11 | PIN, CONNECTOR 3P | |

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| | | | |
|---|---|---|---|
| | | MISCELLANEOUS | |
| | | ********** | |
| ⚠4 | 1-769-079-51 | CORD, POWER (KR) | |
| ⚠4 | 1-775-790-81 | CORD, POWER (AUS) | |
| ⚠4 | 1-790-757-51 | CORD, POWER (US, CND) | |
| ⚠4 | 1-827-597-81 | CORD, POWER (TW) | |
| ⚠4 | 1-830-891-11 | CORD, POWER (UK) | |
| ⚠4 | 1-831-370-11 | CORD, POWER (AEP, EE, RU, SP) | |
| 70 | 1-797-374-11 | DECK, MECHANICAL (H-21SB) | |
| 102 | 1-452-899-11 | MAGNET | |
| ⚠151 | 8-820-126-01 | OPTICAL PICK-UP BLOCK | (KSM-213CDP/C2NP) (Including sled motor (M402), spindle motor (M401)) |
| 152 | 1-832-404-21 | CABLE, FLEXIBLE FLAT (16 CORE) | |
| ⚠F001 | 1-532-275-33 | FUSE (T0.16AL/250V) | (AEP, UK, EE, RU, KR, AUS) |
| ⚠F001 | 1-532-467-33 | FUSE (T0.315AL/250V) (US, CND, SP, TW) | |
| ⚠F002 | 1-532-275-33 | FUSE (T0.16AL/250V) (SP) | |
| FFC151 | 1-832-627-21 | CABLE, FLEXIBLE FLAT (23 CORE) | |
| FFC701 | 1-832-634-21 | CABLE, FLEXIBLE FLAT (25 CORE) | (US, CND, SP, TW, KR, AUS) |
| FFC702 | 1-832-644-21 | CABLE, FLEXIBLE FLAT (27 CORE) | (AEP, UK, EE, RU) |
| ⚠PT005 | 1-443-829-11 | TRANSFORMER, POWER (AEP, UK, EE, RU) | |
| ⚠PT005 | 1-443-856-11 | TRANSFORMER, POWER (US, CND) | |
| ⚠PT005 | 1-443-857-11 | TRANSFORMER, POWER (KR) | |
| ⚠PT005 | 1-443-858-11 | TRANSFORMER, POWER (SP, TW, AUS) | |
| S201 | 1-771-853-11 | SWITCH, DETECTION (LIMIT) | |
| SW750 | 1-692-960-11 | SWITCH, PUSH (1 KEY) | (CD LID OPEN/CLOSE DETECT) |

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| | | | |
|---|---|---|---|
| | | ACCESSORIES | |
| | | ********** | |
| ⚠ | 1-569-008-22 | ADAPTOR, CONVERSION 2P (SP) | |
| ⚠ | 1-770-019-61 | ADAPTOR, CONVERSION PLUG (UK) | |

Refer to the SUPPLEMENT-1 for the PT-AC board of the except AEP, UK, East European and Russian models.

*MEMO*

# HCD-EH10

SONY

# SERVICE MANUAL

Ver. 1.4 2006.03

*US Model*
*Canadian Model*
*AEP Model*
*UK Model*
*E Model*
*Australian Model*

# SUPPLEMENT-1

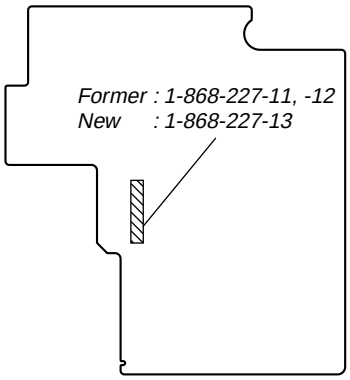
**File this supplement with the service manual.**

**Subject: Change of MAIN and PT-AC boards (Suffix-13)**

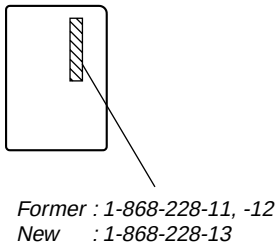
In this set, MAIN and PT-AC boards have been changed in the midway of production.
Printed wiring boards and schematic diagrams of new type, and changed parts list are described in this supplement-1.
Refer to original service manual for other information.

## 1. NEW/FORMER DESCRIPTION

**– MAIN Board (Component Side) –**




**– PT-AC Board (Component Side) –**



# 2. DIAGRAMS

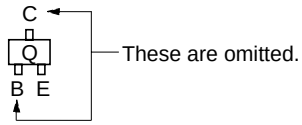
- **Note for Printed Wiring Boards and Schematic Diagrams**

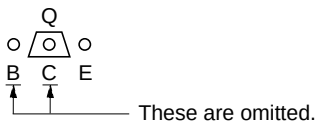
**Note on Printed Wiring Board:**

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

- Indication of transistor




**Note on Schematic Diagram:**

- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

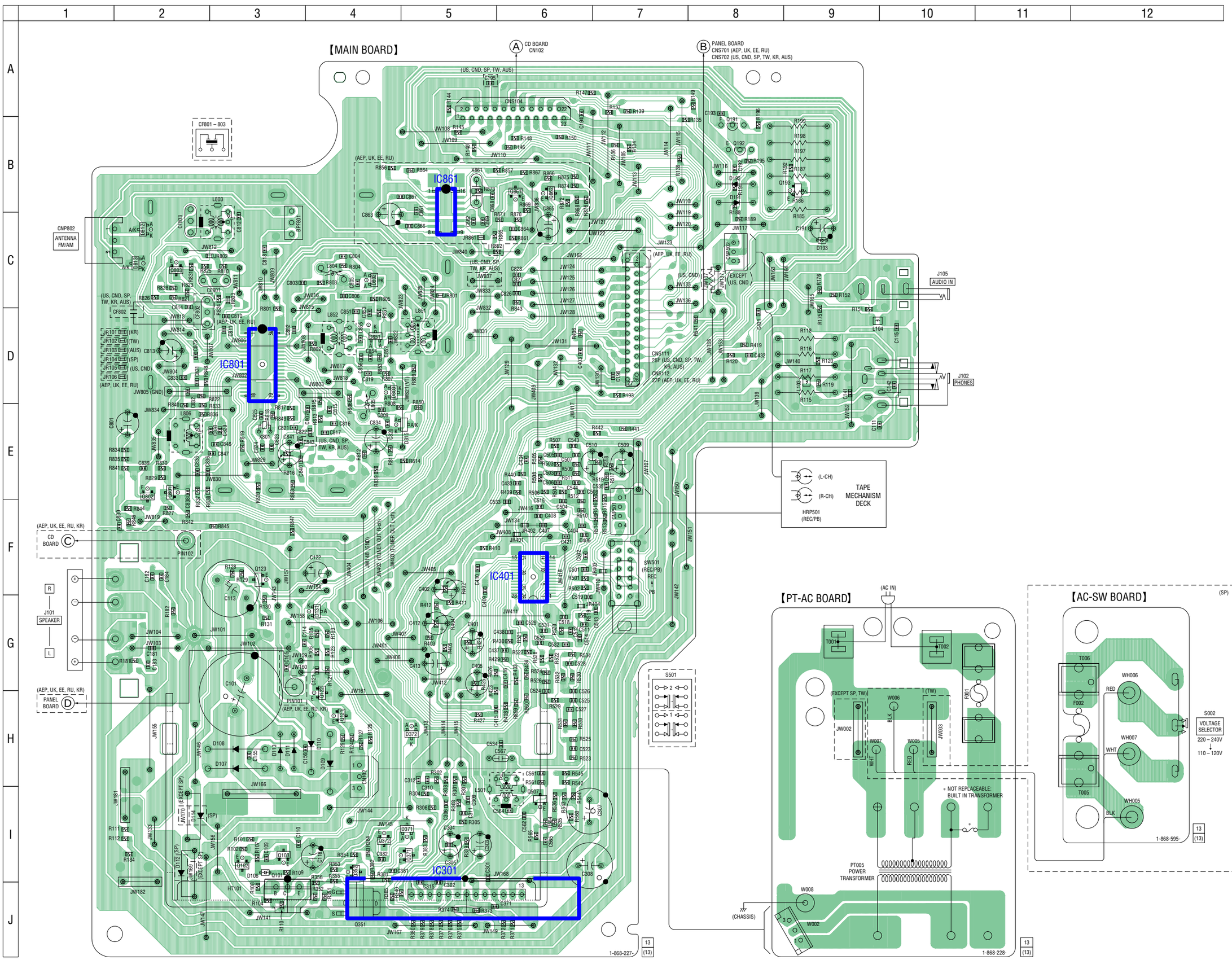
| **Note:** | **Note:** |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié. |

- ▬ : B+ Line.
- ▭ : Adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : FM
  [ ] : AM
  { } : REC
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ➡ : AM
  ⇨ : CD PLAY
  ⇨ : TAPE PLAY
  ➡ : REC
  ➡ : AUX IN
- Abbreviation
  AUS : Australian model
  CND : Canadian model
  EE : East European model
  KR : Korean model
  RU : Russian model
  SP : Singapore model
  TW : Taiwan model

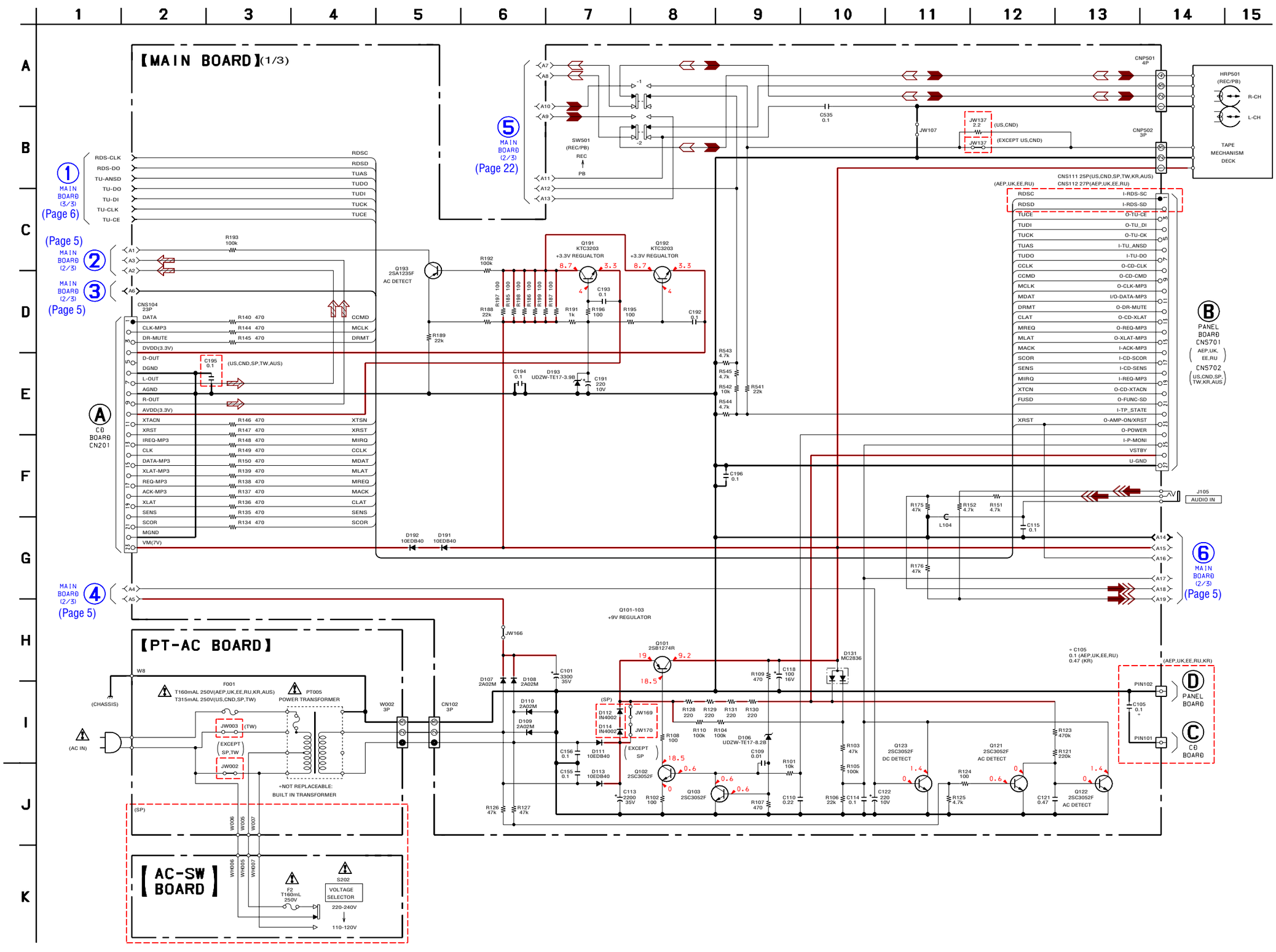
## 2-1. PRINTED WIRING BOARDS – MAIN Section – : Uses unleaded solder.

- **Semiconductor Location**

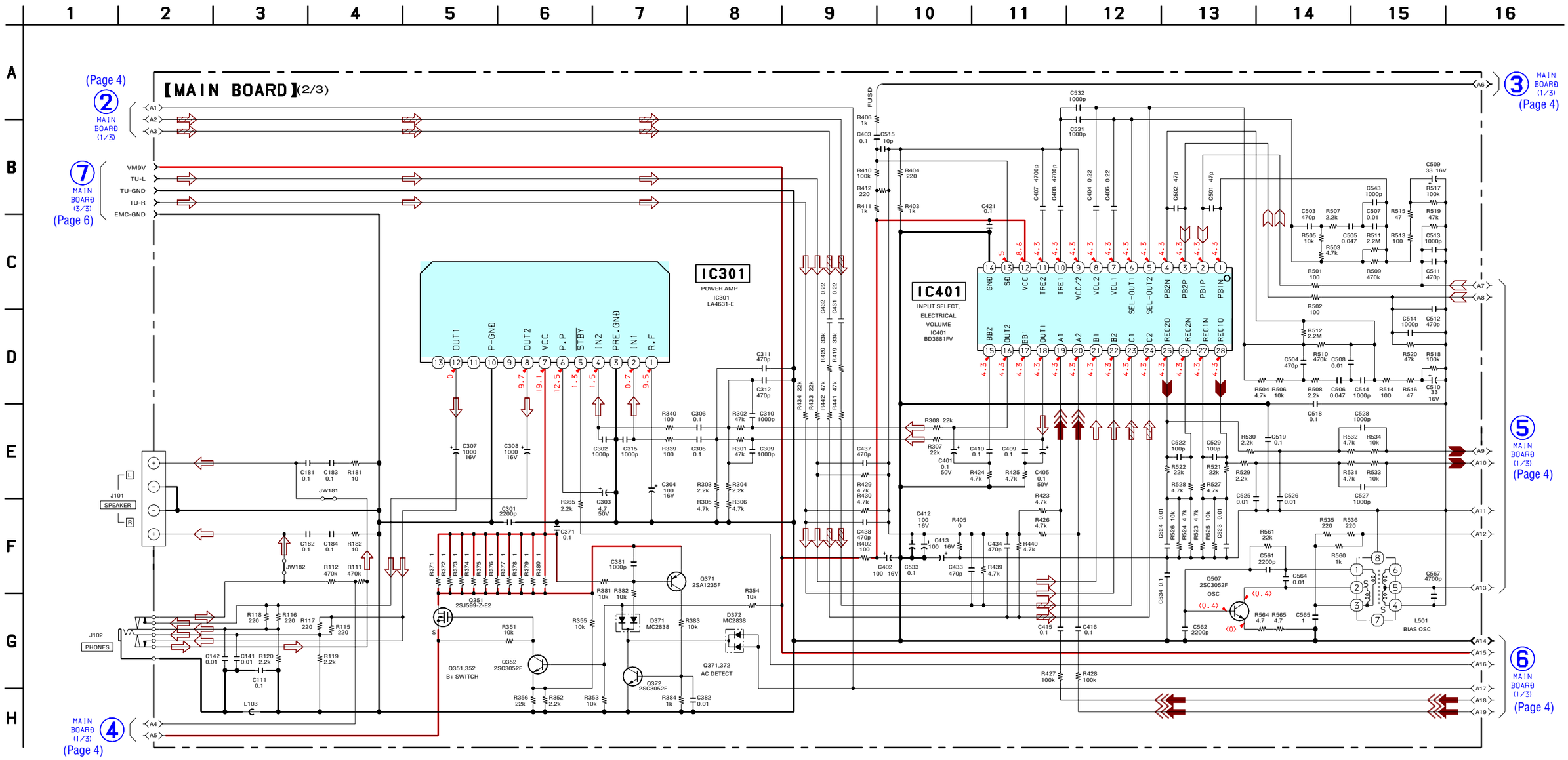
| Ref. No. | Location |
|---|---|
| D106 | I-3 |
| D107 | H-3 |
| D108 | H-3 |
| D109 | H-4 |
| D110 | H-4 |
| D111 | H-3 |
| D113 | H-3 |
| D131 | G-4 |
| D191 | B-8 |
| D192 | B-8 |
| D193 | C-9 |
| D371 | I-5 |
| D372 | H-5 |
| D802 | C-4 |
| D803 | D-4 |
| D812 | C-2 |
| D813 | C-2 |
| D815 | E-5 |
| D851 | D-4 |
| IC301 | J-5 |
| IC401 | F-6 |
| IC801 | D-3 |
| IC861 | B-5 |
| Q101 | J-3 |
| Q102 | I-3 |
| Q103 | I-3 |
| Q121 | H-4 |
| Q122 | H-4 |
| Q123 | F-3 |
| Q191 | B-8 |
| Q192 | B-8 |
| Q193 | B-9 |
| Q351 | J-4 |
| Q352 | I-4 |
| Q371 | I-5 |
| Q372 | I-4 |
| Q507 | I-6 |
| Q801 | E-2 |
| Q802 | E-2 |
| Q803 | C-2 |
| Q861 | B-6 |
| Q862 | B-6 |



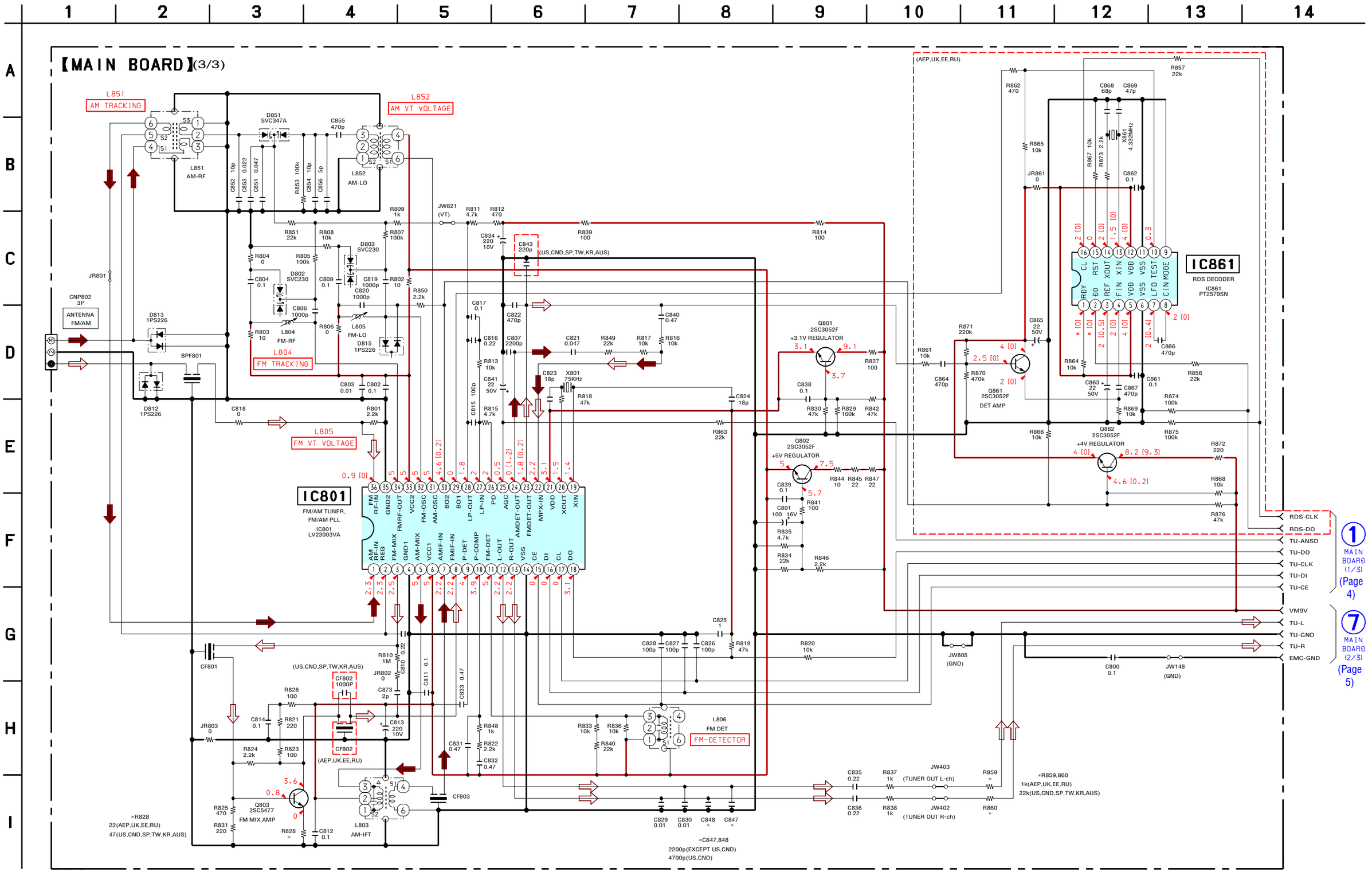
## 2-2. SCHEMATIC DIAGRAM – MAIN Section (1/3) –



## 2-3. SCHEMATIC DIAGRAM – MAIN Section (2/3) –



## 2-4. SCHEMATIC DIAGRAM – MAIN Section (3/3) –



# 3. ELECTRICAL PARTS LIST

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Abbreviation
  AUS : Australian model EE : East European model RU : Russian model TW : Taiwan model
  CND : Canadian model KR : Korean model SP : Singapore model
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA... : µA... uPA... : µPA...
  uPB... : µPB... uPC... : µPC...
  uPD... : µPD...
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | A-1158-542-A | AC-SW BOARD, COMPLETE (SP) | | | |
| | | ********** | | | |
| | 1-533-233-31 | FUSE HOLDER | | | |
| | | < SWITCH > | | | |
| ⚠S002 | 1-786-920-11 | SWITCH, VOLTAGE SELECTION | | | |
| | | | | | (VOLTAGE SELECTOR) |
| ********** | | | | | |
| | A-1138-536-A | MAIN BOARD, COMPLETE (AEP, UK, EE, RU) | | | |
| | A-1158-524-A | MAIN BOARD, COMPLETE (US, CND) | | | |
| | A-1158-531-A | MAIN BOARD, COMPLETE (KR) | | | |
| | A-1158-537-A | MAIN BOARD, COMPLETE (AUS) | | | |
| | A-1158-540-A | MAIN BOARD, COMPLETE (SP) | | | |
| | A-1169-746-A | MAIN BOARD, COMPLETE (TW) | | | |
| | | ********** | | | |
| | 7-685-646-79 | SCREW +BVTT 3X8 TYPE2 N-S | | | |
| | | | | | (US, CND, AEP, UK, EE) |
| | 7-685-647-79 | SCREW +BVTT 3X10 TYPE2 N-S | | | |
| | | | | | (SP, TW, KR, AUS) |
| | | < BAND PASS FILTER > | | | |
| BPF801 | 1-236-711-41 | FILTER, BAND PASS | | | |
| | | < CAPACITOR > | | | |
| C101 | 1-128-549-11 | ELECT | 3300uF | 20% | 35V |
| C105 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| | | | | | (AEP, UK, EE, RU) |
| C105 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| | | | | | (KR) |
| C109 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C110 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C111 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C113 | 1-126-953-11 | ELECT | 2200uF | 20% | 35V |
| C114 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C115 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C118 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C121 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C122 | 1-126-934-11 | ELECT | 220uF | 20% | 16V |
| C141 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C142 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C155 | 1-165-621-11 | CERAMIC CHIP | 0.1uF | | 50V |
| C156 | 1-165-621-11 | CERAMIC CHIP | 0.1uF | | 50V |
| C181 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C182 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C183 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C184 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C191 | 1-126-934-11 | ELECT | 220uF | 20% | 16V |
| C192 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C193 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C194 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C195 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| | | | | | (US, CND, SP, TW, AUS) |
| C196 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C301 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C302 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C303 | 1-126-963-11 | ELECT | 4.7uF | 20% | 50V |
| C304 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C305 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C306 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C307 | 1-126-767-11 | ELECT | 1000uF | 20% | 16V |
| C308 | 1-126-767-11 | ELECT | 1000uF | 20% | 16V |
| C309 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C310 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C311 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C312 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C315 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C371 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C381 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C382 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C401 | 1-126-956-11 | ELECT | 0.1uF | 20% | 50V |
| C402 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C403 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C404 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C405 | 1-126-956-11 | ELECT | 0.1uF | 20% | 50V |
| C406 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C407 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V |
| C408 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V |
| C409 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C410 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C412 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C413 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C415 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C416 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C421 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C431 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C432 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C433 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C434 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C437 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C438 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C501 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C502 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C503 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C504 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C505 | 1-165-176-11 | CERAMIC CHIP | 0.047uF | 10% | 16V |
| C506 | 1-165-176-11 | CERAMIC CHIP | 0.047uF | 10% | 16V |
| C507 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C508 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C509 | 1-126-966-11 | ELECT | 33uF | 20% | 50V |
| C510 | 1-126-966-11 | ELECT | 33uF | 20% | 50V |
| C511 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C512 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C513 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C514 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C515 | 1-162-915-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C518 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C519 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C522 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C523 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C524 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C525 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C526 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C527 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C528 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C529 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C531 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C532 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C533 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C534 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C535 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C543 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C544 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C561 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C562 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C564 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C565 | 1-115-156-11 | CERAMIC CHIP | 1uF | | 10V |
| C567 | 1-130-479-00 | MYLAR | 0.0047uF | 5% | 50V |
| C800 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C801 | 1-126-933-11 | ELECT | 100uF | 20% | 16V |
| C802 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C803 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C804 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C806 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C807 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| C809 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C810 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C811 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C812 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C813 | 1-126-934-11 | ELECT | 220uF | 20% | 16V |
| C814 | 1-164-156-11 | CERAMIC CHIP | 0.1uF | | 25V |
| C815 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C816 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C817 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C818 | 1-216-864-11 | SHORT CHIP | 0 | | |
| C819 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C820 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C821 | 1-165-176-11 | CERAMIC CHIP | 0.047uF | 10% | 16V |
| C822 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C823 | 1-162-918-11 | CERAMIC CHIP | 18PF | 5% | 50V |
| C824 | 1-162-918-11 | CERAMIC CHIP | 18PF | 5% | 50V |
| C825 | 1-125-837-11 | CERAMIC CHIP | 1uF | 10% | 6.3V |
| C826 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C827 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C828 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C829 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C830 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C831 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C832 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C833 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C834 | 1-126-934-11 | ELECT | 220uF | 20% | 16V |
| C835 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C836 | 1-115-467-11 | CERAMIC CHIP | 0.22uF | 10% | 10V |
| C838 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C839 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V- |
| C840 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C841 | 1-126-965-11 | ELECT | 22uF | 20% | 50V |
| C843 | 1-162-960-11 | CERAMIC CHIP | 220PF | 10% | 50V |
| | | | | | (US, CND, SP, TW, KR, AUS) |
| C847 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10% | 50V |
| | | | | | (EXCEPT US, CND) |
| C847 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V |
| | | | | | (US, CND) |
| C848 | 1-162-966-11 | CERAMIC CHIP | 0.0022uF | 10%50V | |
| | | | | | (EXCEPT US, CND) |
| C848 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V |
| | | | | | (US, CND) |
| C851 | 1-165-176-11 | CERAMIC CHIP | 0.047uF | 10% | 16V |
| C852 | 1-162-915-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C853 | 1-164-227-11 | CERAMIC CHIP | 0.022uF | 10% | 25V |
| C854 | 1-162-915-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C855 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C856 | 1-162-910-11 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C861 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| | | | | | (AEP, UK, EE, RU) |
| C862 | 1-100-566-91 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| | | | | | (AEP, UK, EE, RU) |
| C863 | 1-126-965-11 | ELECT | 22uF | 20% | 50V |
| | | | | | (AEP, UK, EE, RU) |
| C864 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| | | | | | (AEP, UK, EE, RU) |
| C865 | 1-126-965-11 | ELECT | 22uF | 20% | 50V |
| | | | | | (AEP, UK, EE, RU) |
| C866 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| | | | | | (AEP, UK, EE, RU) |
| C867 | 1-162-962-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| | | | | | (AEP, UK, EE, RU) |
| C868 | 1-162-925-11 | CERAMIC CHIP | 68PF | 5% | 50V |
| | | | | | (AEP, UK, EE, RU) |
| C869 | 1-162-923-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| | | | | | (AEP, UK, EE, RU) |
| C873 | 1-162-907-11 | CERAMIC CHIP | 2PF | 0.25PF | 50V |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | < FILTER/CAPACITOR > | |
| CF801 | 1-795-426-11 | FILTER, CERAMIC | |
| CF802 | 1-128-821-51 | SERAMIC 1000PF 5% 50V | (US, CND, SP, TW, KR, AUS) |
| CF802 | 1-579-554-21 | FILTER, CERAMIC | (AEP, UK, EE, RU) |
| CF803 | 1-781-962-21 | FILTER, CERAMIC | |
| | | < CONNECTOR > | |
| CNP501 | 1-815-445-11 | PIN, CONNECTOR (PWB) 4P | |
| CNP502 | 1-815-444-11 | PIN, CONNECTOR (PWB) 3P | |
| * CNP802 | 1-506-680-11 | PLUG, CONNECTOR (2.5mm) 3P | |
| CNS104 | 1-779-291-11 | CONNECTOR, FFC (LIF (NON-ZIF)) 23P | |
| CNS111 | 1-779-293-11 | CONNECTOR, FFC (LIF (NON-ZIF)) 25P | (US, CND, SP, TW, KR, AUS) |
| CNS112 | 1-779-295-11 | CONNECTOR, FFC (LIF (NON-ZIF)) 27P | (AEP, UK, EE, RU) |
| | | < DIODE > | |
| D106 | 6-501-172-01 | DIODE UDZW-TE17-8.2B | |
| D107 | 8-719-046-07 | DIODE 2A02M | |
| D108 | 8-719-046-07 | DIODE 2A02M | |
| D109 | 8-719-046-07 | DIODE 2A02M | |
| D110 | 8-719-046-07 | DIODE 2A02M | |
| D111 | 6-500-522-01 | DIODE 10EDB40-TA1B2 | |
| D112 | 8-719-904-02 | DIODE 1N4002 (SP) | |
| D113 | 6-500-522-01 | DIODE 10EDB40-TA1B2 | |
| D114 | 8-719-904-02 | DIODE 1N4002 (SP) | |
| D131 | 6-500-334-01 | DIODE MC2836-T112-1 | |
| D191 | 6-500-522-01 | DIODE 10EDB40-TA1B2 | |
| D192 | 6-500-522-01 | DIODE 10EDB40-TA1B2 | |
| D193 | 6-501-164-01 | DIODE UDZW-TE17-3.9B | |
| D371 | 6-500-335-01 | DIODE MC2838-T112-1 | |
| D372 | 6-500-335-01 | DIODE MC2838-T112-1 | |
| D802 | 6-501-369-01 | DIODE SV230-TB-E | |
| D803 | 6-501-369-01 | DIODE SV230-TB-E | |
| D812 | 8-719-062-51 | DIODE 1PS226-115 | |
| D813 | 8-719-062-51 | DIODE 1PS226-115 | |
| D815 | 8-719-062-51 | DIODE 1PS226-115 | |
| D851 | 6-501-142-01 | DIODE SVC347A-TL-E | |
| | | < IC > | |
| IC301 | 6-706-641-01 | IC LA4631-E | |
| IC401 | 6-702-895-01 | IC BD3881FV | |
| IC801 | 6-708-840-01 | IC LV23003VA | |
| IC861 | 6-708-918-01 | IC PT2579SN (AEP, UK, EE, RU) | |
| | | < JACK > | |
| J101 | 1-780-314-11 | TERMINAL BOARD (SPEAKERS) | |
| J102 | 1-815-629-11 | JACK (PHONES) | |
| J105 | 1-566-822-51 | JACK (AUDIO IN) | |
| | | < JUMPER RESISTOR > | |
| JR101 | 1-216-864-11 | SHORT CHIP 0 (KR) | |
| JR102 | 1-216-864-11 | SHORT CHIP 0 (TW) | |
| JR103 | 1-216-864-11 | SHORT CHIP 0 (AUS) | |
| JR104 | 1-216-864-11 | SHORT CHIP 0 (SP) | |
| JR105 | 1-216-864-11 | SHORT CHIP 0 (US, CND) | |
| JR106 | 1-216-864-11 | SHORT CHIP 0 (AEP, UK, EE, RU) | |
| JR401 | 1-216-864-11 | SHORT CHIP 0 | |
| JR402 | 1-216-864-11 | SHORT CHIP 0 | |
| JR403 | 1-216-864-11 | SHORT CHIP 0 | |
| JR404 | 1-216-864-11 | SHORT CHIP 0 | |
| JR801 | 1-216-864-11 | SHORT CHIP 0 | |
| JR802 | 1-216-864-11 | SHORT CHIP 0 | |
| JR803 | 1-216-864-11 | SHORT CHIP 0 | |
| JR861 | 1-216-864-11 | SHORT CHIP 0 (AEP, UK, EE, RU) | |
| | | < RESISTOR > | |
| JN137 | 1-249-385-11 | CARBON 2.2 5% 1/4W | (US,CND) |
| | | < COIL > | |
| L103 | 1-469-152-11 | FERRITE, EMI (SMD) (2012) | |
| L104 | 1-469-152-11 | FERRITE, EMI (SMD) (2012) | |
| L501 | 1-456-094-11 | TRANSFORMER, BIAS OSCILLATION | |
| L803 | 1-433-741-11 | TRANSFORMER, IF | |
| L804 | 1-457-163-11 | COIL, AIR-CORE | |
| L805 | 1-457-162-11 | COIL, AIR-CORE | |
| L806 | 1-457-168-11 | COIL, DET | |
| L851 | 1-457-161-11 | COIL, AM ANTENNA | |
| L852 | 1-456-596-11 | COIL, MW OSC | |
| | | < CONNECTOR > | |
| * PIN101 | 1-564-187-00 | PIN, CONNECTOR (AEP, UK, EE, RU, KR) | |
| * PIN102 | 1-564-187-00 | PIN, CONNECTOR (AEP, UK, EE, RU, KR) | |
| | | < TRANSISTOR > | |
| Q101 | 8-729-141-83 | TRANSISTOR 2SB1094-LK | |
| Q102 | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 | |
| Q103 | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 | |
| Q121 | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 | |
| Q122 | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 | |
| Q123 | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 | |
| Q191 | 8-729-036-86 | TRANSISTOR KTC3203Y-AT | |
| Q192 | 8-729-036-86 | TRANSISTOR KTC3203Y-AT | |
| Q193 | 8-729-600-22 | TRANSISTOR 2SA1235-F | |
| Q351 | 6-550-843-01 | FET 2SJ599-Z-E2-AZ | |
| Q352 | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 | |
| Q371 | 8-729-600-22 | TRANSISTOR 2SA1235-F | |
| Q372 | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 | |
| Q507 | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 | |
| Q801 | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 | |
| Q802 | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 | |
| Q803 | 6-550-304-01 | TRANSISTOR 2SC5477-T122-1 | |
| Q861 | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 | |
| Q862 | 8-729-120-28 | TRANSISTOR 2SC1623-L5L6 | |
| | | < RESISTOR > | |
| R101 | 1-216-833-11 | METAL CHIP 10K 5% 1/10W | |
| R102 | 1-216-809-11 | METAL CHIP 100 5% 1/10W | |
| R103 | 1-216-841-11 | METAL CHIP 47K 5% 1/10W | |
| R104 | 1-216-845-11 | METAL CHIP 100K 5% 1/10W | |
| R105 | 1-216-845-11 | METAL CHIP 100K 5% 1/10W | |
| R106 | 1-216-837-11 | METAL CHIP 22K 5% 1/10W | |

**MAIN**

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R107 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R108 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R109 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R110 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R111 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R112 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R115 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R116 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R117 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R118 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R119 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R120 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R121 | 1-216-849-11 | METAL CHIP | 220K | 5% | 1/10W |
| R123 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R124 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R125 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R126 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R127 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R128 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R129 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R130 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R131 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R134 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R135 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R136 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R137 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R138 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R139 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R140 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R144 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R145 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R146 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R147 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R148 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R149 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R150 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R151 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R152 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R175 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R176 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R181 | 1-216-797-11 | METAL CHIP | 10 | 5% | 1/10W |
| R182 | 1-216-797-11 | METAL CHIP | 10 | 5% | 1/10W |
| R185 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R186 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R187 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R188 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R189 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R191 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R192 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R193 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R195 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R196 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R197 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R198 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R199 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R301 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R302 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R303 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R304 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R305 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R306 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R307 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R308 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R339 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R340 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R351 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R352 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R353 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R354 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R355 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R356 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R365 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R371 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R372 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R373 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R374 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R375 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R376 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R377 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R378 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R379 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R380 | 1-218-446-11 | METAL CHIP | 1 | 5% | 1/10W |
| R381 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R382 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R383 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R384 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R402 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R403 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R404 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R405 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R406 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R410 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R411 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R412 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R419 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R420 | 1-216-839-11 | METAL CHIP | 33K | 5% | 1/10W |
| R423 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R424 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R425 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R426 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R427 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R428 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R429 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R430 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R433 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R434 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R439 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R440 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R441 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R442 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R501 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R502 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R503 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R504 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R505 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R506 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R507 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R508 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R509 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R510 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R511 | 1-216-861-11 | METAL CHIP | 2.2M | 5% | 1/10W |
| R512 | 1-216-861-11 | METAL CHIP | 2.2M | 5% | 1/10W |
| R513 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R514 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R515 | 1-216-805-11 | METAL CHIP | 47 | 5% | 1/10W |
| R516 | 1-216-805-11 | METAL CHIP | 47 | 5% | 1/10W |
| R517 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R518 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R519 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R520 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R521 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R522 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R523 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R524 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R525 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R526 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R527 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R528 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R529 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R530 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R531 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R532 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R533 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R534 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R535 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R536 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R541 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R542 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R543 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R544 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R545 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R560 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R561 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R564 | 1-216-793-11 | METAL CHIP | 4.7 | 5% | 1/10W |
| R565 | 1-216-793-11 | METAL CHIP | 4.7 | 5% | 1/10W |
| R801 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R802 | 1-216-797-11 | METAL CHIP | 10 | 5% | 1/10W |
| R803 | 1-216-797-11 | METAL CHIP | 10 | 5% | 1/10W |
| R804 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R805 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R806 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R807 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R808 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R809 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R810 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/10W |
| R811 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R812 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R813 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R814 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R815 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R816 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R817 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R818 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R819 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R820 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R821 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R822 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R823 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R824 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R825 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W |
| R826 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R827 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R828 | 1-216-801-11 | METAL CHIP | 22 | 5% | 1/10W (AEP, UK, EE, RU) |
| R828 | 1-216-805-11 | METAL CHIP | 47 | 5% | 1/10W (US, CND, SP, TW, KR, AUS) |
| R829 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R830 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R831 | 1-216-813-11 | METAL CHIP | 220 | 5% | 1/10W |
| R833 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R834 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R835 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R836 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R837 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R838 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R839 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R840 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R841 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R842 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R843 | 1-216-853-11 | METAL CHIP | 470K | 5% | 1/10W |
| R844 | 1-216-797-11 | METAL CHIP | 10 | 5% | 1/10W |
| R845 | 1-216-801-11 | METAL CHIP | 22 | 5% | 1/10W |
| R846 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R847 | 1-216-801-11 | METAL CHIP | 22 | 5% | 1/10W |
| R848 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R849 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R850 | 1-216-825-11 | METAL CHIP | 2.2K | 5% | 1/10W |
| R851 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R853 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R856 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W (AEP, UK, EE, RU) |
| R857 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W (AEP, UK, EE, RU) |
| R859 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W (AEP, UK, EE, RU) |
| R859 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W (US, CND, SP, TW, KR, AUS) |
| R860 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W (AEP, UK, EE, RU) |
| R860 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W (US, CND, SP, TW, KR, AUS) |
| R861 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W (AEP, UK, EE, RU) |
| R862 | 1-216-817-11 | METAL CHIP | 470 | 5% | 1/10W (AEP, UK, EE, RU) |
| R863 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R864 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W (AEP, UK, EE, RU) |
| R865 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W (AEP, UK, EE, RU) |
| R866 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W (AEP, UK, EE, RU) |

# HCD-EH10

**Ver. 1.4**

**MAIN** **PT-AC**

| Ref. No. | Part No. | Description | | Remark |
|---|---|---|---|---|
| R867 | 1-216-833-11 | METAL CHIP | 10K | 5% 1/10W (AEP, UK, EE, RU) |
| R868 | 1-216-833-11 | METAL CHIP | 10K | 5% 1/10W (AEP, UK, EE, RU) |
| R869 | 1-216-833-11 | METAL CHIP | 10K | 5% 1/10W (AEP, UK, EE, RU) |
| R870 | 1-216-853-11 | METAL CHIP | 470K | 5% 1/10W (AEP, UK, EE, RU) |
| R871 | 1-216-849-11 | METAL CHIP | 220K | 5% 1/10W (AEP, UK, EE, RU) |
| R872 | 1-216-813-11 | METAL CHIP | 220 | 5% 1/10W (AEP, UK, EE, RU) |
| R873 | 1-216-825-11 | METAL CHIP | 2.2K | 5% 1/10W (AEP, UK, EE, RU) |
| R874 | 1-216-845-11 | METAL CHIP | 100K | 5% 1/10W (AEP, UK, EE, RU) |
| R875 | 1-216-845-11 | METAL CHIP | 100K | 5% 1/10W (AEP, UK, EE, RU) |
| R876 | 1-216-841-11 | METAL CHIP | 47K | 5% 1/10W (AEP, UK, EE, RU) |
| | | < SWITCH > | | |
| SW501 | 1-762-369-11 | SWITCH, SLIDE (REC/PB) | | |
| | | < VIBRATOR > | | |
| X801 | 1-767-388-21 | VIBRATOR, CRYSTAL (75kHz) | | (US, CND, SP, TW, KR, AUS) |
| X801 | 1-795-926-11 | VIBRATOR, CRYSTAL (75kHz) | | (AEP, UK, EE, RU) |
| X861 | 1-579-900-21 | VIBRATOR, CRYSTAL (4.332MHz) | | (AEP, UK, EE, RU) |
| ********** | | | | |
| | A-1138-529-A | PT-AC BOARD, COMPLETE (EXCEPT SP, TW) | | |
| | A-1158-541-A | PT-AC BOARD, COMPLETE (SP) | | |
| | A-1169-744-A | PT-AC BOARD, COMPLETE (TW) | | |
| | | ********** | | |
| | 1-533-233-31 | FUSE HOLDER | | |
| | | < CONNECTOR > | | |
| W002 | 1-819-131-11 | PIN, CONNECTOR 3P | | |
| ********** | | | | |
| | | MISCELLANEOUS | | |
| | | ********** | | |
| ⚠PT005 | 1-443-829-11 | TRANSFORMER, POWER (AEP, UK, EE, RU) | | |
| ⚠PT005 | 1-443-856-11 | TRANSFORMER, POWER (US, CND) | | |
| ⚠PT005 | 1-443-857-11 | TRANSFORMER, POWER (KR) | | |
| ⚠PT005 | 1-443-858-11 | TRANSFORMER, POWER (SP, TW, AUS) | | |

# HCD-EH10

SONY

# SERVICE MANUAL

**Ver. 1.4 2006.03**

*US Model*
*Canadian Model*
*AEP Model*
*UK Model*
*E Model*
*Australian Model*

# SUPPLEMENT-2

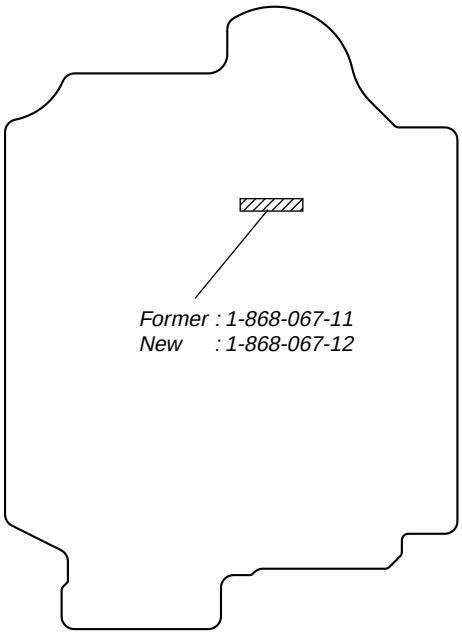
**File this supplement with the service manual.**

**Subject: Change of CD board (Suffix-12)**

In this set, CD board has changed in the midway of production.
Printed wiring board and schematic diagram of new type, and changed parts list are described in this supplement-2.
Refer to original service manual for other information.

## 1. NEW/FORMER DESCRIPTION

**– CD Board (Component Side) –**




**9-879-855-82**

## 2. DIAGRAMS

- **Note for Printed Wiring Board and Schematic Diagram**

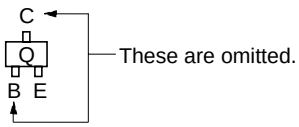
**Note on Printed Wiring Board:**

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ▭ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

| Caution: | |
|---|---|
| Pattern face side: (Conductor Side) | Parts on the pattern face side seen from the pattern face are indicated. |
| Parts face side: (Component Side) | Parts on the parts face side seen from the parts face are indicated. |

- Indication of transistor




**Note on Schematic Diagram:**

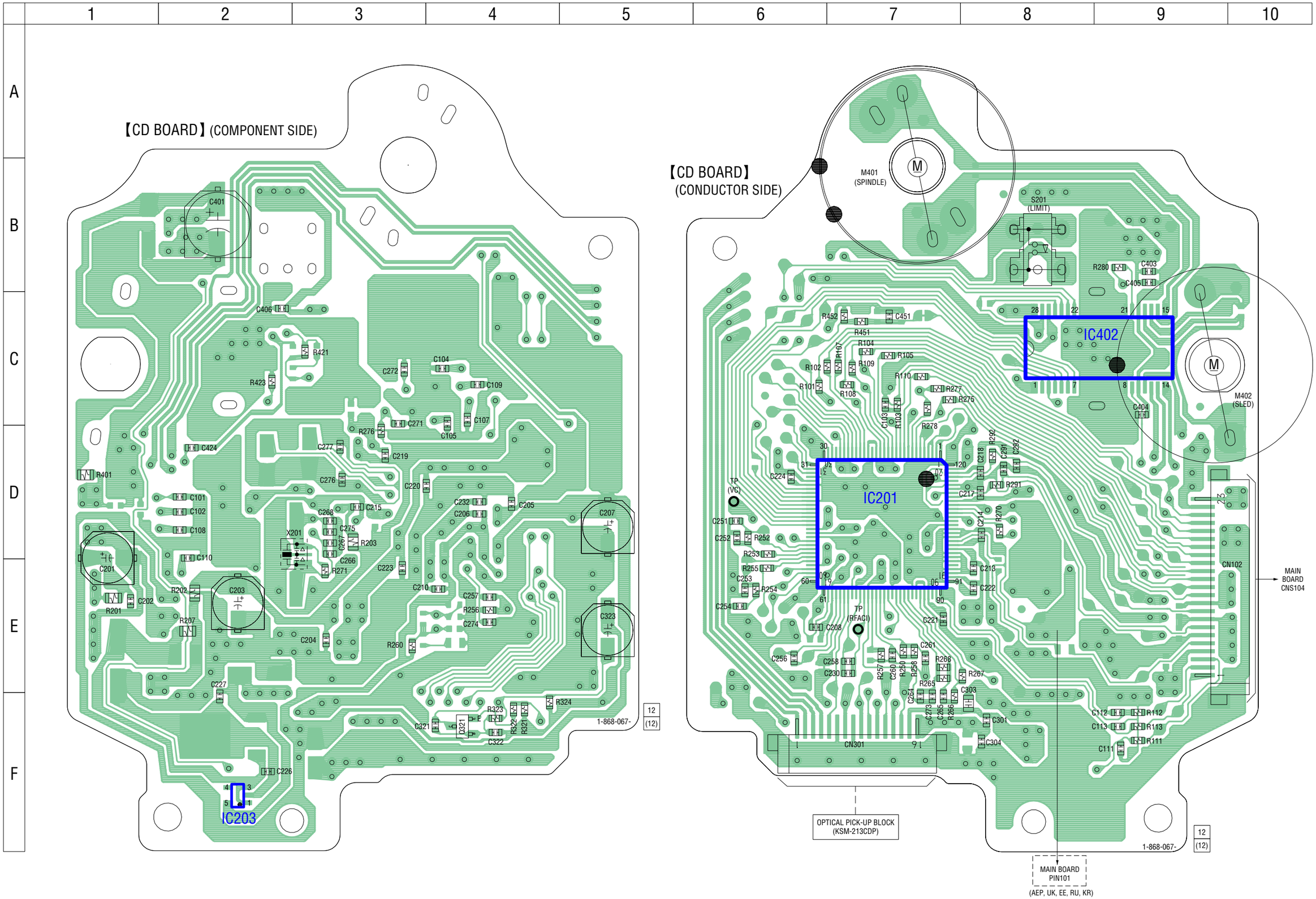
- All capacitors are in μF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.

| **Note:** | **Note:** |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié. |

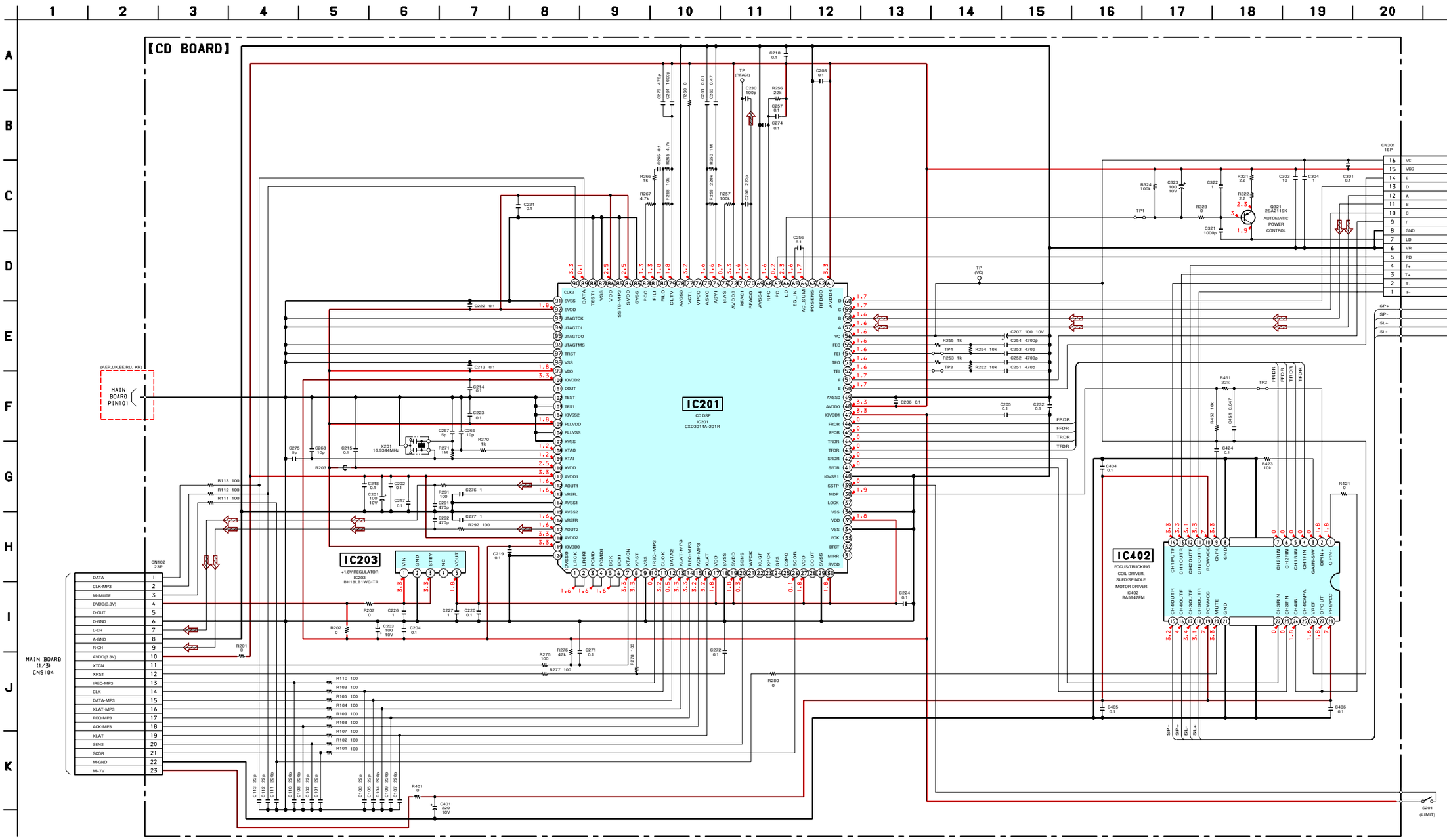
- ▬ : B+ Line.
- Voltages are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : CD PLAY

- Abbreviation
  EE : East European model
  KR : Korean model
  RU : Russian model

**2-1. PRINTED WIRING BOARD – CD Board –** : **Uses unleaded solder.**



## 2-2. SCHEMATIC DIAGRAM – CD Board –



CD

# 3. ELECTRICAL PARTS LIST

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA... : µA... uPA... : µPA...
  uPB... : µPB... uPC... : µPC...
  uPD... : µPD...
- CAPACITORS
  uF: µF
- COILS
  uH: µH

When indicating parts by reference number, please include the board.

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | A-1134-279-A | CD BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | < CAPACITOR > | | | |
| C101 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C102 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C103 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C104 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V |
| C105 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C107 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V |
| C108 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V |
| C109 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V |
| C110 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V |
| C111 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V |
| C112 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C113 | 1-162-919-11 | CERAMIC CHIP | 22PF | 5% | 50V |
| C201 | 1-128-995-21 | ELECT CHIP | 100uF | 20% | 10V |
| C202 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C203 | 1-128-995-21 | ELECT CHIP | 100uF | 20% | 10V |
| C204 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C205 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C206 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C207 | 1-128-995-21 | ELECT CHIP | 100uF | 20% | 10V |
| C208 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C210 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C213 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C214 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C215 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C217 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C218 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C219 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C220 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C221 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C222 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C223 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C224 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C226 | 1-165-908-11 | CERAMIC CHIP | 1uF | 10% | 10V |
| C227 | 1-165-908-11 | CERAMIC CHIP | 1uF | 10% | 10V |
| C230 | 1-162-927-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C232 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C251 | 1-164-315-11 | CERAMIC CHIP | 470PF | 5% | 50V |
| C252 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V |
| C253 | 1-164-315-11 | CERAMIC CHIP | 470PF | 5% | 50V |
| C254 | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C256 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C257 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C258 | 1-164-230-11 | CERAMIC CHIP | 220PF | 5% | 50V |
| C260 | 1-117-863-11 | CERAMIC CHIP | 0.47uF | 10% | 6.3V |
| C261 | 1-162-970-11 | CERAMIC CHIP | 0.01uF | 10% | 25V |
| C264 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C265 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C266 | 1-162-915-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C267 | 1-162-910-11 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C268 | 1-162-915-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C271 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C272 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C273 | 1-164-315-11 | CERAMIC CHIP | 470PF | 5% | 50V |
| C274 | 1-107-826-11 | CERAMIC CHIP | 0.1uF | 10% | 16V |
| C275 | 1-162-910-11 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C276 | 1-165-908-11 | CERAMIC CHIP | 1uF | 10% | 10V |
| C277 | 1-165-908-11 | CERAMIC CHIP | 1uF | 10% | 10V |
| C291 | 1-164-315-11 | CERAMIC CHIP | 470PF | 5% | 50V |
| C292 | 1-164-315-11 | CERAMIC CHIP | 470PF | 5% | 50V |
| C301 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C303 | 1-137-710-11 | CERAMIC CHIP | 10uF | 20% | 6.3V |
| C304 | 1-165-908-11 | CERAMIC CHIP | 1uF | 10% | 10V |
| C321 | 1-162-964-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C322 | 1-165-908-11 | CERAMIC CHIP | 1uF | 10% | 10V |
| C323 | 1-128-995-21 | ELECT CHIP | 100uF | 20% | 10V |
| C401 | 1-128-394-11 | ELECT CHIP | 220uF | 20% | 10V |
| C404 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C405 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C406 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C424 | 1-164-360-11 | CERAMIC CHIP | 0.1uF | | 16V |
| C451 | 1-165-176-11 | CERAMIC CHIP | 0.047uF | 10% | 16V |
| | | < CONNECTOR > | | | |
| CN102 | 1-770-706-21 | CONNECTOR, FFC/FPC 23P | | | |
| CN301 | 1-770-425-51 | CONNECTOR, FFC/FPC 16P | | | |
| | | < IC > | | | |
| IC201 | 8-753-246-30 | IC CXD3014A-201R | | | |
| IC203 | 6-709-050-01 | IC BH18LB1WG-TR | | | |
| IC402 | 6-705-808-01 | IC BA5947FM-E2 | | | |

**CD**

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < TRANSISTOR > | | | |
| Q321 | 6-551-120-01 | TRANSISTOR | 2SA2119K | | |
| | | < RESISTOR/FERRITE BEAD > | | | |
| R101 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R102 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R103 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R104 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R105 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R107 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R108 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R109 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R110 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R111 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R112 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R113 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R201 | 1-216-295-00 | SHORT CHIP | 0 | | |
| R202 | 1-216-295-00 | SHORT CHIP | 0 | | |
| R203 | 1-500-445-21 | FERRITE, EMI (SMD) (2012) | | | |
| R207 | 1-216-295-00 | SHORT CHIP | 0 | | |
| R250 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/10W |
| R252 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R253 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R254 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R255 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R256 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R257 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R258 | 1-216-849-11 | METAL CHIP | 220K | 5% | 1/10W |
| R260 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R265 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R266 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R267 | 1-216-829-11 | METAL CHIP | 4.7K | 5% | 1/10W |
| R268 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R270 | 1-216-821-11 | METAL CHIP | 1K | 5% | 1/10W |
| R271 | 1-216-857-11 | METAL CHIP | 1M | 5% | 1/10W |
| R275 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R276 | 1-216-841-11 | METAL CHIP | 47K | 5% | 1/10W |
| R277 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R278 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R280 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R291 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R292 | 1-216-809-11 | METAL CHIP | 100 | 5% | 1/10W |
| R321 | 1-216-789-11 | METAL CHIP | 2.2 | 5% | 1/10W |
| R322 | 1-216-789-11 | METAL CHIP | 2.2 | 5% | 1/10W |
| R323 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R324 | 1-216-845-11 | METAL CHIP | 100K | 5% | 1/10W |
| R401 | 1-216-295-00 | SHORT CHIP | 0 | | |
| R421 | 1-216-864-11 | SHORT CHIP | 0 | | |
| R423 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| R451 | 1-216-837-11 | METAL CHIP | 22K | 5% | 1/10W |
| R452 | 1-216-833-11 | METAL CHIP | 10K | 5% | 1/10W |
| | | < VIBRATOR > | | | |
| X201 | 1-795-101-21 | VIBRATOR, CERAMIC (16.9344MHz) | | | |

*MEMO*

## REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

| Ver. | Date | Description of Revision |
|---|---|---|
| 1.0 | 2005.09 | New |
| 1.1 | 2005.11 | Correction of Torque and Tape Tension Measurements<br>Addition of Ref. No. 76, 77 on EXPLODED VIEWS (ECN-ECB33898/ENG-05012) |
| 1.2 | 2005.12 | Change of MAIN, PT-AC and PANEL boards (suffix-12)<br>Change of PANEL board (suffix-13)<br>Change of MAIN and PT-AC boards (suffix-13) (SUPPLEMENT-1)<br>(ECN-ECB27448/ECB33087) |
| 1.3 | 2006.01 | Addition of US, Canadian and Singapore models |
| 1.4 | 2006.03 | Addition of Taiwan, Korean and Australian models<br>Change of CD board (Suffix-12) (SUPPLEMENT-2) (ECN-ECB42207) |
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